

Agency Roles and Authorization in  
Groundwater Management: Groundwater  
Management Strategy for Michigan

Michigan Dept. of Natural Resources, Lansing

Prepared for

Environmental Protection Agency  
Chicago, Il

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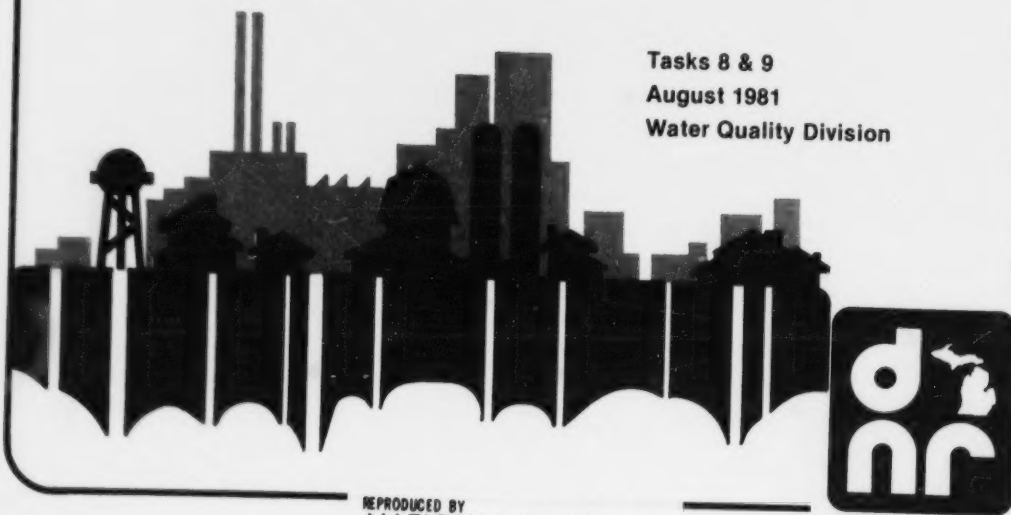
U.S. Department of Commerce  
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## Agency Roles and Authorization In Groundwater Management

# Groundwater Management Strategy For Michigan

Tasks 8 & 9  
August 1981  
Water Quality Division



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| <b>16. Abstract (Limit: 200 words)</b><br>This document is a descriptive presentation of the roles that various agencies play in groundwater management. Included is a Pollutant Source/Agency Matrix which relates potential sources of groundwater pollution to federal, state and local agencies that have a role in addressing the potential pollutants or problem sources. The matrix illustrates the range of pollutant sources affected by individual agencies, and may also serve as a key to determining which agencies are involved in the control of specific sources of groundwater pollution.<br><br>The charts which follow the matrix summarize each agency's groundwater management roles and classify each role as being one of prevention, detection, evaluation, resolution, or a combination of types. The charts also identify the agencies' authorization for performing the activities which enable them to fulfill their roles, and lists the other agencies with whom they coordinate. |  |                                                         |           |                                                                                  |
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AGENCY ROLES AND AUTHORIZATION  
IN GROUNDWATER MANAGEMENT

August, 1981  
Groundwater Management  
Strategy for Michigan  
Tasks 8 & 9: Agency  
Roles and Authorization

Water Quality Division  
Michigan Department of  
Natural Resources

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The contamination of the state's groundwaters is an environmental and public health issue of increasing concern to the citizens of Michigan. This is due to the fact that about forty-nine percent of the state's residents depend on groundwater for their drinking water supplies. This amounts to almost five million people. At the present time over 50,000 sites have been identified as either having known, suspected, or potential groundwater contamination problems. Primary pollutant sources for the known contamination sites have been identified as illegal or improper groundwater discharges from manufacturing sites and landfills, locations where hazardous materials are handled or stored, and sites where large quantities of materials are stored. A variety of other sources including septic systems; production, transportation, storage, and/or use of petroleum products and salt brines; and septic tank wastes can also lead to contamination of groundwaters.

The extent of contamination from these sources depends on several factors including the rate of contaminant movement and the size of the contaminant plume. The rate of contaminant movement is determined by groundwater flow rates, chemical and physical interactions with aquifer materials, and changes in water chemistry. The shape and size of the contaminant plume depends on local geology, groundwater flow, the types and concentrations of contaminants, and the continuity of leachate formation. In addition, groundwater contaminants tend to be reduced in concentration with time and distance.

The means of preventing and abating specific groundwater pollution incidents is determined to a large extent by the particular circumstances of the action which causes the pollution. It also depends on whether or not the source of the contamination is readily identifiable, or if there are several suspected sources. Once the pollutants have entered the groundwater or accumulated in soils above an aquifer, the costs involved in determining the extent of the pollution, removing or controlling the contaminants, and providing replacement water supplies can be substantial.

An example of a contamination incident in which the responsible party is willing and able to provide the necessary relief is the Chesapeake & Ohio (C&O) train derailment which occurred in 1978 in Woodland Park, Newaygo County. Approximately 40,000 gallons of phenol, 25,000 to 30,000 gallons of vinylidene chloride and 15,000 gallons of ethylene oxide were lost to the ground. An emergency spill response crew was brought to the scene but their efforts did not prevent groundwater contamination and migration of the contaminant plume. One hundred and fifty test wells and nine purge wells have been installed. Approximately 1,000,500 gallons per day of contaminated waters are being removed from the ground and treated. Also, C&O has been supplying bottled water to three homes and has drilled a potable well to service these homes. Clean-up of the spill was initiated by the railroad as a result of administrative action by the state.

In the case of O'Dells Gas City near Grand Rapids in Kent County, 22,500 gallons of regular gasoline were lost from a seam leak on an underground tank. The loss was discovered during an inventory in January, 1980. In March of 1980 gasoline vapors appeared in a lounge next door to the station. The City of Grand Rapids installed six monitor wells and a crotch well for recovery of floating hydrocarbons. In June of the same year, the DNR had seven wells installed in an attempt to outline the contamination. Seven additional wells

were later installed to further define the extent of the contamination. To date, the extent of the contamination has not been fully defined. The station owner has been pumping out the recovery well several times a day since last March. This action alone will not remove all the contamination. Approximately 1,000 gallons of gasoline have been recovered so far.

The two contamination situations which have been outlined are only examples of the various combinations of events which may exist. Numerous federal, state, and local agencies may become involved in one or several aspects of these contamination incidents. For the purposes of this report, the roles of these agencies have been divided into four categories.

- 1.) Prevention - Actions which result in the protection of the quality and/or quantity of groundwater resources. For example: permitting, zoning, spill response, education, siting, etc.
- 2.) Detection - Actions which result in the identification of groundwater quality and/or quantity conditions. For example: monitoring, site inspections, record keeping, complaint response, etc.
- 3.) Evaluation - Actions which quantify the nature, extent and sources of the groundwater quantity and/or quality problem. This assessment may include the range of contaminants, concentrations, movements, causes, and environmental, economic and public health impacts. For example: hydrogeological surveys, intensive monitoring, etc.
- 4.) Resolution - Actions which result in the development of alternative courses of action, the selection of an alternative and its implementation. For example: enforcement actions, clean-up activities, feasibility studies, etc.

Activities in the Prevention and Detection categories take place whether or not a groundwater problem exists. However, in the Evaluation and Resolution categories a problem has definitely been identified. Since activities are not necessarily exclusive to any particular role, an agency's activities may be repeated in several categories.

A variety of laws, regulations and policies provide authorization for the activities an agency performs with respect to its role in groundwater management. The authorization may take the form of a federal law, state act or local ordinance in addition to numerous rules, regulations and policies. In the two contamination incidents that have been described, the authorization enabling the state to require pollution abatement and clean-up was derived from the Water Resources Commission Act, Act 245, 1929.

The following information is intended to be a descriptive presentation of the roles that various agencies play in groundwater management. The Pollutant Source/Agency Matrix relates potential sources of groundwater pollution to federal, state and local agencies which have a role in addressing the potential pollutant or problem sources. The matrix illustrates the range of pollutant sources affected by individual agencies, and may also serve as a key to determining which agencies are involved in the control of specific sources of groundwater pollution.

The charts which follow the matrix summarize each agency's groundwater management roles and classify each role as being one of Prevention (P), Detection (D), Evaluation (E), or Resolution (R). A combination of these types is also possible. The charts also identify the agencies' authorization for performing the activities which enable them to fulfill their roles, and lists the other agencies with whom they coordinate.

## Pollutant Source Categories

### Landfills and Dumps (1, 2, 3 & 4):

Landfills and dumps used for solid waste disposal can contribute to groundwater contamination. Contamination of the groundwater can occur when leachate generated within landfills from solid wastes seeps into the underlying groundwater. The degree of potential hazard to the groundwater depends in part on the volume and nature of material in the landfill, and the hydrogeologic nature of the area in which the landfill is located.

### Pits, Ponds and Lagoons (5, 6, 7 & 8):

Groundwater contamination can occur as a result of seepage of contaminants to the groundwater from pits, ponds and lagoons. The degree of potential hazard to the groundwater depends on the method of discharge, the hydrogeologic nature of the area, and the volume and nature of the materials discharged.

### Irrigation (9 & 10):

Irrigation of agricultural lands and the treatment of wastewaters using irrigation techniques can result in increasing amounts of water infiltrating into an aquifer. Recharge by spreading treated wastewater effluent over the land is also a concern due to the pollutants that may be transported with the leachate into the aquifer.

### Septic Tanks and Tile Field Systems (11 & 12):

There are many existing and potential problems associated with the malfunctioning of these systems. Contamination from excessive loadings of nutrients, chlorinated hydrocarbons and other chemicals from consumer products which are disposed of or used in septic tanks may be linked to the continued use of septic tank/tile field systems.

### Other Disposal Sites (13, 14, 15, 16 & 17):

Septage Disposal Sites - Septic tank waste haulers remove septage wastes and transport and dispose of these wastes at approved sites. The method of transporting, storing and handling of septic tank wastes, the amount of waste, and the hydrologic nature of the area in which septage is disposed, would determine the degree of potential hazard to the groundwater.

Liquid Industrial Waste Disposal Sites - Liquid industrial waste haulers must keep records of the date, source, quantity and type of waste, and the location and method of disposal. They are not to dispose of wastes onto or into the ground except at locations specified by the Water Resources Commission. There are areas where waste oil can be spread on roadways and earth surfaces for dust control or soil stabilization purposes. Wastes are not to be placed in a loca-

Liquid Industrial Waste Disposal Sites (CONTINUED) - tion where they could enter ground or surface waters. The degree of potential hazard that liquid industrial wastes pose to the groundwater depends on the hydrogeologic regime of the area, the type of wastes, and the methods of storage, handling, and disposal of these wastes.

Dry Wells - Dry wells are designed to allow seepage into the ground and can become a point source for contamination of the groundwater. If the dry well is placed directly into the groundwater, or if seasonally high water table conditions allow contact of the dry well with the groundwater, the probability of groundwater contamination increases. The type and volume of materials disposed in dry wells, the construction of the dry well, and the hydrogeologic nature of the area determine the potential hazard to the groundwater at each site.

Gravel Pits - Historically, gravel pits which are used for road construction and gravel extraction have provided a ready-made disposal area for waste materials. Unfortunately, gravel pits are in relatively permeable sediments and are often in, or very close to, the water table hence permitting contaminants to readily enter the groundwater. The degree of potential hazard to the groundwater would be determined by the type and volume of material located or deposited in these pits, and the hydrogeologic nature of the area.

Brining and Oiling of Roads - Many of the state's roads are salted during the winter months. Depending on the amount and frequency of application and the hydrogeologic nature of the area, sodium, calcium, chloride, and possibly other chemicals in the salt may contribute to groundwater contamination when the salt is washed from the roads. Oil washed from oiled roads also could contribute to groundwater contamination.

#### Transportation Spills (18 & 19):

Transportation spills may occur along highways and railroads, or occur as a result of breaks or leaks in pipelines. In addition, spills may occur as a result of leaks or breaks in sewer lines. The kind and volume of chemical or material spilled and the hydrogeologic nature of the spill area would determine the degree of potential hazard to the groundwater.

#### Sites Where Chemicals are Produced, Stored, Used and/or Handled (20, 21, 22, 23 & 24):

The production, storage, use or handling of chemicals may threaten human health and the environment if they are improperly treated, stored, disposed of or otherwise improperly managed. Increasing numbers of groundwater contamination incidents involving toxic and hazardous materials are being discovered.

#### Deep Wells (25, 26, 27 & 28):

This category includes several different kinds of deep wells. Waste disposal wells are used to inject wastes deep into the sub-surface for disposal. In deep wells used for storage, chemicals may be injected down deep wells for temporary storage. In these first two types of deep wells, sub-surface formations that have been determined to be hydrogeologically acceptable for the injection of wastes and storage of products are used. Natural brine wells pump salt brines from natural

Deep Wells (CONTINUED) - brine yielding formations. Solution mining wells are wells which are used to solution mine salt from deep underground salt strata. This mining is accomplished by pumping water down into salt formations and pumping out the brines that are formed when the salt is dissolved by the water. Depending on drilling and abandonment procedures and the hydrogeologic nature of the area, these deep wells may serve as avenues by which groundwater contamination may occur.

#### Oil and Gas Fields (29):

Depending upon drilling and abandonment procedures and the hydrogeologic nature of the areas, oil and gas wells may serve as avenues for groundwater contamination. Brine is normally produced with oil and/or gas. One gallon of brine can contaminate 1,000 gallons of fresh water with a salty taste. The handling and disposal of these production brines may pose potential groundwater problems. In addition to producing brines, brine also is mixed with clays to produce drilling muds utilized in drilling oil and gas wells. Spent brine drilling muds are normally disposed of in pits on the drilling site. These mud pits are potential sources for groundwater contamination. Thus, any well drilled for oil and gas may pose potential brine problems even though the well may not actively produce brine.

#### Pollutants Affecting Water Supply Wells (30, 31, 32 & 33):

These categories identify those agencies whose responsibilities include the development and maintenance of safe drinking water supplies. These agencies can potentially become involved in any groundwater contamination incident that threatens or contaminates drinking water supplies. Water supply wells are classified into the following categories:

- 30.) Type I Wells - year-round residential public water supplies (e.g. communities, townships, trailer parks)
- 31.) Irrigation and Processing Water Wells
- 32.) Type II Wells - non-community wells which serve over 25 people (e.g. restaurants, campgrounds, industry)  
  
Type III Wells - non-community wells which serve under 25 people less than 60 days per year.
- 33.) Private Wells - household and private water supplies.

| POLLUTANT SOURCE/MANAGEMENT                          | SYSTEM MATRIX                                                                 |                                               |
|------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------|
|                                                      | POLLUTANT SOURCE                                                              | CATEGORY KEY                                  |
| Landfills and Dumps                                  | 15.) Dry Wells                                                                | 25.) Waste Disposal                           |
| 1.) Municipal                                        | 16.) Gravel Pits                                                              | 26.) Storage                                  |
| 2.) Commercial & Industrial                          | 17.) Mining and Oiling of Roads                                               | 27.) Natural Brine Production                 |
| 3.) Agricultural                                     | 18.) Transportation Spills                                                    | 28.) Solution Mining                          |
| 4.) Mining                                           | 19.) Pipelines                                                                | 29.) Exploring, Producing and Abandoned Wells |
| Pits, Ponds and Lagoons                              | 20.) Commercial and Manufacturing Sites                                       | 30.) Type I Wells                             |
| 5.) Municipal                                        | 21.) Pesticide, Herbicide, or Fertilizer Formulators, Dealers, or Applicators | 31.) Irrigation and Processing                |
| 6.) Commercial & Industrial                          | 22.) Road Salt Storage Facilities                                             | 32.) Type II and Type III Wells               |
| 7.) Agricultural                                     | 23.) Agricultural Sites                                                       | 33.) Private Wells                            |
| 8.) Mining                                           | 24.) Agricultural Sites                                                       |                                               |
| P = Prevention                                       |                                                                               |                                               |
| DEPARTMENT OF NATURAL RESOURCES                      |                                                                               |                                               |
| Water Quality Division                               |                                                                               |                                               |
| Groundwater Compliance and Special Studies           |                                                                               |                                               |
| Oil and Hazardous Materials Control                  |                                                                               |                                               |
| Permit Enforcement Branch                            |                                                                               |                                               |
| Investigation and Enforcement Branch                 |                                                                               |                                               |
| Engineering and Technical Services                   |                                                                               |                                               |
| Biology                                              |                                                                               |                                               |
| Wastewater Operations                                |                                                                               |                                               |
| Municipal Design Review                              |                                                                               |                                               |
| Facilities Planning                                  |                                                                               |                                               |
| Water Quality Management Planning                    |                                                                               |                                               |
| Environmental Protection Division                    |                                                                               |                                               |
| Office of Toxic Material Control                     |                                                                               |                                               |
| Office of Hazardous Waste Management                 |                                                                               |                                               |
| Point Source Studies                                 |                                                                               |                                               |
| Environmental Enforcement Division                   |                                                                               |                                               |
| Permit Enforcement Branch                            |                                                                               |                                               |
| Investigation and Enforcement Branch                 |                                                                               |                                               |
| Resource Recovery Division                           |                                                                               |                                               |
| Solid Waste Management, Enforcement & Consultation   |                                                                               |                                               |
| Geology                                              |                                                                               |                                               |
| Water Management Division                            |                                                                               |                                               |
| Groundwater Division                                 |                                                                               |                                               |
| Oil and Gas                                          |                                                                               |                                               |
| Mineral Wells                                        |                                                                               |                                               |
| DEPARTMENT OF AGRICULTURE                            |                                                                               |                                               |
| Toxic and Emergency Response Division                |                                                                               |                                               |
| Water-Related Drains Division                        |                                                                               |                                               |
| Soil and Water Conservation Division                 |                                                                               |                                               |
| Plant Industry Division                              |                                                                               |                                               |
| DEPARTMENT OF PUBLIC HEALTH                          |                                                                               |                                               |
| Chemicals and Health Center                          |                                                                               |                                               |
| Environmental Epidemiology                           |                                                                               |                                               |
| Water Supply Division                                |                                                                               |                                               |
| Community Environmental Health Division              |                                                                               |                                               |
| DEPARTMENT OF STATE POLICE                           |                                                                               |                                               |
| Private Marshal Division                             |                                                                               |                                               |
| Environmental Protection Agency                      |                                                                               |                                               |
| Office of Surface Mining                             |                                                                               |                                               |
| Office of Water Research and Technology <sup>1</sup> |                                                                               |                                               |
| Geological Survey                                    |                                                                               |                                               |
| Bureau of Land Management                            |                                                                               |                                               |
| Army Corps of Engineers                              |                                                                               |                                               |
| National Resources Council                           |                                                                               |                                               |
| Agriculture Department                               |                                                                               |                                               |
| LOCAL AGENCIES                                       |                                                                               |                                               |
| Regional Planning Agencies                           |                                                                               |                                               |
| Drain Commissions                                    |                                                                               |                                               |
| Health Departments                                   |                                                                               |                                               |
| Sanitation and Villages                              |                                                                               |                                               |
| Townships                                            |                                                                               |                                               |
| Counties                                             |                                                                               |                                               |
| STATE COMMISSIONS                                    |                                                                               |                                               |
| Toxic Substances Control Commission                  |                                                                               |                                               |
| Water Resources Commission                           |                                                                               |                                               |
| Public Service Commission                            |                                                                               |                                               |
| Natural Resources Commission                         |                                                                               |                                               |

<sup>1</sup> The Office of Water Research and Technology provides funding and training services for research work which may potentially impact all the listed pollutant sources.  
<sup>2</sup> The Water Resources Council performs studies and planning activities in addition to administering the Title III grant program. These activities may potentially impact all the listed pollutant sources.



| POLLUTANT SOURCE/MANAGEMENT                          | SYSTEM MATRIX |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
|------------------------------------------------------|---------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|--|
|                                                      | CATEGORY KEY  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Landfills and Dumps                                  | 1             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |  |
| 1.) Municipal                                        |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 2.) Commercial & Industrial                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 3.) Agricultural                                     |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 4.) Mining                                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Pits, Ponds and Lagoons                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 5.) Municipal                                        |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 6.) Commercial & Industrial                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 7.) Agricultural                                     |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 8.) Mining                                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| 9.) Evaluation                                       |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| DEPARTMENT OF NATURAL RESOURCES                      |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Water Quality Division                               |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Compliance and Special Studies                       |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Field Operations and Materials Control               |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Engineering and Technical Services                   |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Biology                                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Wastewater Operations                                |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Pesticide Design Review                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Pesticide Management Planning                        |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Water Quality Management Planning                    |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Environmental Services Division                      |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Office of Hazardous Waste Management                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Point Source Studies                                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Pollution Enforcement Division                       |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Investigation Branch                                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Hazardous Waste Investigation Branch                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Investigation and Legal Enforcement Branch           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Natural Resources Enforcement Branch                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Resource Recovery Division                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Solid Waste Management, Enforcement & Consultation   |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Geology                                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Water Resources Division                             |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Geological Survey Division                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Groundwater Geology                                  |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Oil and Gas                                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Mineral Wells                                        |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| DEPARTMENT OF AGRICULTURE                            |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Emergency Response Division                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Plant Industry Division                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Soil and Water Conservation Division                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Plant Industry Division                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| DEPARTMENT OF PUBLIC HEALTH                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Chemicals and Health Center                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Environmental Epidemiology                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Water Supply Division                                |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Community Environmental Health Division              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| DEPARTMENT OF STATE POLICE                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Criminal Investigation Division                      |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Traffic Marshal Division                             |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| FEDERAL AGENCIES                                     |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Environmental Protection Agency                      |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Office of Surface Mining                             |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Office of Water Research and Technology <sup>1</sup> |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Geological Survey                                    |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Bureau of Land Management                            |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Army Corps of Engineers                              |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| National Resources Council                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Agriculture Department                               |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| LOCAL AGENCIES                                       |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Regional Planning Agencies                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Brain Commissions                                    |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Health Departments                                   |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Municipalities and Villages                          |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Township Commissions                                 |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| OTHER COMMISSIONS                                    |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Toxic Substance Control Commission                   |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Water Resources Commission                           |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Public Service Commission                            |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |
| Natural Resources Commission                         |               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |  |

<sup>1</sup> The Office of Water Research and Technology provides funding and training services for research work which may potentially impact all the listed pollutant sources.  
<sup>2</sup> The Water Resources Council performs studies and planning activities in addition to administering the Title III grant program. These activities may potentially impact all the listed pollutant sources.

|                                                      | POLLUTANT SOURCE MANAGEMENT |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      | SYSTEM MATRIX |  |
|------------------------------------------------------|-----------------------------|-----------------------------|------------------|------------|--------------|-----------------------------|------------------|------------|-----------------|-----------------|------------------------------|-------------------|-------------|------------|-----------------|--------------|-----------------------------|----------------------|---------------|--|
|                                                      | CATEGORY KEY                |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      | CATEGORY KEY  |  |
| Landfills and Dumps                                  |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
|                                                      | 1.) Municipal               | 2.) Commercial & Industrial | 3.) Agricultural | 4.) Mining | 5.) Domestic | 6.) Commercial & Industrial | 7.) Agricultural | 8.) Mining | 9.) Residential | 10.) Industrial | 11.) Commercial & Industrial | 12.) Agricultural | 13.) Mining | 14.) Other | 15.) Deep Wells | 16.) Storage | 17.) Natural Gas Production | 18.) Solution Mining |               |  |
| Pits, Ponds and Lagoons                              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
|                                                      | 1.) Municipal               | 2.) Commercial & Industrial | 3.) Agricultural | 4.) Mining | 5.) Domestic | 6.) Commercial & Industrial | 7.) Agricultural | 8.) Mining | 9.) Residential | 10.) Industrial | 11.) Commercial & Industrial | 12.) Agricultural | 13.) Mining | 14.) Other | 15.) Deep Wells | 16.) Storage | 17.) Natural Gas Production | 18.) Solution Mining |               |  |
| A = Resolution                                       |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
|                                                      | 1.) Municipal               | 2.) Commercial & Industrial | 3.) Agricultural | 4.) Mining | 5.) Domestic | 6.) Commercial & Industrial | 7.) Agricultural | 8.) Mining | 9.) Residential | 10.) Industrial | 11.) Commercial & Industrial | 12.) Agricultural | 13.) Mining | 14.) Other | 15.) Deep Wells | 16.) Storage | 17.) Natural Gas Production | 18.) Solution Mining |               |  |
| DEPARTMENT OF NATURAL RESOURCES                      |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Water Quality Division                               |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Groundwater Compliance and Special Studies           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Field Operations                                     |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Engineering and Technical Services                   |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Public Information                                   |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Municipal Design Review                              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Facilities Planning                                  |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Water Quality Management Planning                    |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Environmental Services Division                      |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Office of Toxic Materials Control                    |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Office of Hazardous Waste Management                 |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Point Source Studies                                 |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Environmental Enforcement Division                   |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Permit Enforcement Branch                            |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Hazardous Waste and Litigation Branch                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Investigation and Legal Services Branch              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Waste Assessment Branch                              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Resource Recovery Division                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Solid Waste Management, Enforcement & Consultation   |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Geology                                              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Water Management Division                            |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Geological Survey Division                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Geological Engineering                               |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Oil and Gas                                          |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Mineral Wells                                        |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| DEPARTMENT OF AGRICULTURE                            |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Toxic and Emergency Response Division                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Inter-County Drainage Division                       |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Soil and Water Conservation Division                 |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Plant Industry Division                              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| DEPARTMENT OF PUBLIC HEALTH                          |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Chemicals and Health Center                          |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Environmental Epidemiology                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Water Supply Division                                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Community Environmental Health Division              |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| DEPARTMENT OF STATE POLICE                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| FIRE MARSHAL DIVISION                                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| FEDERAL AGENCIES                                     |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Environmental Protection Agency                      |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Office of Surface Mining                             |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Office of Water Research and Technology <sup>1</sup> |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Geological Survey                                    |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Bureau of Land Management                            |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Bureau of Reclamation                                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Agriculture Department                               |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| LOCAL AGENCIES                                       |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Regional Planning Agencies                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Brain Commissions                                    |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Public Utilities                                     |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Municipalities and Villages                          |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Towns                                                |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| COUNTIES                                             |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| STATE COMMISSIONS                                    |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Toxic Substances Control Commission                  |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Water Resources Commission                           |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Public Service Commission                            |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |
| Natural Resources Commission                         |                             |                             |                  |            |              |                             |                  |            |                 |                 |                              |                   |             |            |                 |              |                             |                      |               |  |

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<sup>2</sup> The Water Resources Council performs studies and planning activities in addition to administering the Title III grant program. These activities may potentially impact all the listed pollutant sources.

### Sources of State Authority

- Act 136, 1881, Privies and Water Closets
- Act 98, 1913, Sewerage Systems Act
- Act 17, 1921, Department of Conservation Act
- Act 9, 1929, Natural Gas
- Act 16, 1929, Oil, Gas, and Brine Lines
- Act 69, 1929, Certificates of Convenience and Necessity
- Act 245, 1929, The Water Resources Commission Act
- Act 297, 1937, Soil Conservation Districts Law
- Act 61, 1939, Oil and Gas Act
- Act 342, 1939, County Public Improvements Act
- Act 183, 1943, County Rural Zoning Enabling Act
- Act 184, 1943, Township Rural Zoning Act
- Act 246, 1945, Township Ordinances Act
- Act 281, 1945, Act to provide for regional planning
- Act 282, 1945, County Planning Act
- Act 359, 1947, Charter Townships Act
- Act 243, 1951, Servicing of Septic Tanks, Seepage Pits or Cesspools
- Act 40, 1956, Drain Code
- Act 168, 1959, Township Planning Act
- Act 293, 1966, Enabling Act for Charter Counties
- Act 165, 1969, Gas Safety Standards
- Act 315, 1969, Mineral Well Act
- Act 92, 1970, Reclamation of Metallic Mining Lands
- Act 347, 1972, Soil Erosion and Sedimentation Control Act
- Act 171, 1976, Pesticide Control Act
- Act 399, 1976, Safe Drinking Water Act
- Act 116, 1978, The John C. Hertel Toxic Substance Control Commission Act
- Act 368, 1978, Public Health Code
- Act 641, 1978, Solid Waste Management Act
- Act 64, 1979, Hazardous Waste Management Act
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund)

### Sources of Federal Authority

- P.L. 89-80; Federal Water Resources Planning Act
- P.L. 92-500; 1972, Federal Clean Water Act
- P.L. 93-523; 1974, Federal Safe Drinking Water Act
- P.L. 94-429; National Park System Mining Activity Regulation
- P.L. 94-469; 1976, Toxic Substances Control Act
- P.L. 94-579; Federal Land Policy and Management Act
- P.L. 94-580; 1976, Resource Conservation and Recovery Act
- P.L. 95-217; 1972, Federal Clean Water Act Amendments
- P.L. 95-467; 1978, Water Research and Development Act

\*7 U.S.C. 1010-1013; Federal Assistance, Resources Conservation and Development Projects

7 U.S.C. 1921-1926, 1932; Agricultural Credit for Pollution Control

- 16 U.S.C. 1001; Watershed Protection and Flood Prevention Act
- 16 U.S.C. 1001-1009; Fish and Wildlife Conservation at Small Watershed Projects
- 16 U.S.C. 2001; Soil and Water Conservation Act of 1977
- 16 U.S.C. 1301-1311; Water Bank Act
- 16 U.S.C. 1604(g (3) (E) (iii)
- 30 U.S.C. 1201; Surface Mining Control and Reclamation Act
- 33 U.S.C. 401, 403; River and Harbor Act of 1899
- 33 U.S.C. 1401; Marine Protection, Research and Sanctuaries Act
- 40 app. U.S.C. 205, 1975; Appalachian Regional Development Act
- 42 U.S.C. 1959-1959h, 1971; Saline Water Conservation Act
- 42 U.S.C. 1961-61c-8; Water Resources Research Act
- 43 U.S.C. 31, 1879; Act of March 3
- 43 U.S.C. 1334 and 1346; Outer Continental Shelf Lands Act
- \*U.S. Codes are a compilation of U.S. statutes according to subject matter

#### Sources of Local Authority

Local Sanitary Codes  
City Charters  
Local Zoning Ordinances  
Local Regulatory Ordinances

Agency Abbreviations (used in text)

MDA - Michigan Department of Agriculture  
MDMB - Michigan Department of Management and Budget  
MDMH - Michigan Department of Mental Health  
MDNR - Michigan Department of Natural Resources  
MDOC - Michigan Department of Corrections  
MDOT - Michigan Department of Transportation  
MDPH - Michigan Department of Public Health  
MDSS - Michigan Department of Social Services

EPA - Environmental Protection Agency  
SCD - Soil Conservation District  
TSCC - Toxic Substance Control Commission  
USGS - United States Geological Survey  
WRC - Water Resources Commission  
NRC - Natural Resources Commission  
TSCC - Toxic Substance Control Commission

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, GROUNDWATER COMPLIANCE AND SPECIAL STUDIES SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                               | AUTHORIZATION                                     | COORDINATION                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Development of the state groundwater management strategy. This includes various responsibilities which may be included in the Detection, Evaluation and Resolution categories also.                                                                                                                   | Act 245, 1929, the Water Resources Commission Act | MDNR - Water Management Division, Resource Recovery Division, Environmental Enforcement Division, Point Source Surveys, Engineering and Technical Services, Water Quality Management Planning, Field Operations; MDPH |
| 2. Reviews and approves groundwater study plans and reports which are submitted as required by permit applications. (Because of staff limitations in the section, this activity is carried out by the Municipal Wastewater Operations Section, Field Operations Section, and Geological Survey Division) |                                                   | MDNR - Geological Survey Division                                                                                                                                                                                     |
| DETECTION                                                                                                                                                                                                                                                                                                |                                                   |                                                                                                                                                                                                                       |
| 1. Monitors the compliance of dischargers with time schedules and effluent limitations specified by state permits and orders of determination governing groundwater discharges.                                                                                                                          | Act 245, 1929, the Water Resources Commission Act | MDNR - Water Quality Districts, Engineering and Technical Services Section, Wastewater Operations Section                                                                                                             |

## EVALUATION

1. Coordinates the evaluation of groundwater contamination problems and evaluates the need for remedial actions.
2. Requires hydrogeologic investigations to be performed by the party responsible for groundwater pollution incidents.
3. Handles groundwater investigations, groundwater plan design and implementation.
4. Conducted the Surface Impoundment Assessment.
5. Evaluates sites for superfund financing.

## RESOLUTION

1. Takes appropriate actions (notices of violation, etc.) to bring a discharger back into compliance with a permit.
2. Prepares administrative enforcement documents and consent orders related to groundwater issues.

## AUTHORIZATION

Act 245, 1929, the Water Resources Commission Act  
P.L. 93-523, 1974, Federal Safe Drinking Water Act

## COORDINATION

MDNR - Water Quality Districts, Office of Toxic Materials Control, Biology Section, Environmental Lab, Point Source Studies Section, Environmental Enforcement Division; Resource Recovery Division; MDPH

MDNR - Geological Survey Division, Environmental Enforcement Division, Water Quality Districts

MDPH - Water Supply Division; EPA

MDNR - Resource Recovery Division; Environmental Enforcement Division; Oil and Hazardous Materials Control Section; Office of Toxic Materials Control; MDPH

MDNR - Environmental Enforcement Division

MDNR - Environmental Enforcement Division

# RESOLUTION

## AUTHORIZATION

## COORDINATION

3. Determines the need for remedial action and reviews and approves remedial action plans.
4. Oversees the implementation of remedial measures.
5. Works on resolving groundwater pollution incidents where no responsible party has been identified.
6. Provides tracking and non-compliance follow-up on all state groundwater discharge permits and orders.
7. Provides litigation support to the Environmental Enforcement Division for litigation involving groundwater discharges or contamination cases.
8. Determines the eligibility of sites for superfund financing.

MDNR - Environmental Enforcement Division, Office of Toxic Materials Control, Water Quality Districts

MDNR - Resource Recovery Division, Environmental Enforcement Division, Water Quality Districts

MDNR - Engineering and Technical Services, Field Operations

MDNR - Environmental Enforcement Division

MDNR - Resource Recovery Division; Environmental Enforcement Division; Oil and Hazardous Materials Control Section; Office of Toxic Materials Control

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund)

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, OIL AND HAZARDOUS MATERIALS CONTROL SECTION

ROLES:

PREVENTION

1. Responds to spills related to the transportation and storage of oil or hazardous wastes.
2. Administers the Pollution Emergency Alert System (P.E.A.S.).

AUTHORIZATION

Act 245, 1929, the Water Resources Commission Act  
Act 64, 1979, Hazardous Waste Management Act  
Act 136, 1969, Liquid Industrial Wastes Act

COORDINATION

County health departments; liquid industrial waste haulers; MDNR - Environmental Enforcement Division and appropriate State agencies

RESOLUTION

1. Administers the Pollution Emergency Alert System (P.E.A.S.).
2. Responds to spills related to the transportation and storage of oil or hazardous wastes.

Act 245, 1929, the Water Resources Commission Act  
Act 64, 1979, Hazardous Waste Management Act  
Act 136, 1969, Liquid Industrial Wastes Act

County health departments; liquid industrial waste haulers; MDNR - Environmental Enforcement Division and appropriate State agencies

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, FIELD OPERATIONS SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | AUTHORIZATION                                            | COORDINATION                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Pollution Incident Prevention Plan (PIPP) review and approval and the inspection of facilities. Plan sets forth: (a) procedures to prevent pollution to the waters of the state from storage and use areas, manufacturing processes, treatment systems, and shipping of oil and materials; (b) Emergency clean up procedures; (c) Type of surveillance employed; (d) Method by which inventories are made. Facilities are inspected to insure compliance with plans. Section is responsible for those industries with discharge permits.</li><li>2. Program for Effective Residuals Management (PERM) - Responsible for the review, approval, and monitoring of industrial residuals disposal under discharge permits. Proper disposal protects groundwater.</li><li>3. Certification program for treatment plant operators. Treatment facilities run by competent operators assure attainment of proper quality effluents.</li></ol> | <p>Act 245, 1929, the Water Resources Commission Act</p> | <p>MDNR - Environmental Services Division, Special Programs Section. Water Quality Division, Oil and Hazardous Materials Control Section; Water Resources Commission</p> <p>MDNR - Resource Recovery Division. Water Quality Division, Wastewater Operations Section</p> <p>MDNR - Water Quality Division, Training and Certification Section; wastewater treatment plant operators</p> |

PREVENTION

4. Inspect sites of proposed treatment facilities and draft state discharge permits for nonmunicipal facilities.
5. Review and approve engineering plans for treatment facilities to insure that effluent discharged can comply with permit.
6. Facility inspections - Insure that facilities are being operated properly and that practices at facility are not causing contamination or do not have the potential of causing contamination.

DETECTION

1. Facility inspections - Inspections of treatment facilities can lead to the detection of contamination incidents. Adequacy of treatment processes, operator certification, and facility conditions are examined.
2. Complaints and referrals - Citizen complaints and referrals from other agencies can lead to the detection of problems from poor treatment, spills, and other waste disposal or manufacturing activities. Also provides response to Pollution Emergency Alert System (PEAS) referrals.

AUTHORIZATION

COORDINATION

MDNR - Water Quality Division, Engineering and Technical Services; Geological Survey Division, Groundwater Geology Unit industries

Act 245, 1929, the Water Resources Commission Act

MDNR - Air Quality Division, Resource Recovery Division, Environmental Enforcement Division, Water Quality Division - Groundwater Compliance Section

| DETECTION                                                                                                                                                                                                                     | AUTHORIZATION                                            | COORDINATION                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>3. Monthly operating reports - State discharge permits require that treatment facilities report the quality of the effluent monthly.</p>                                                                                   | <p>Act 245, 1929, The Water Resources Commission Act</p> |                                                                                                                                                             |
| EVALUATION                                                                                                                                                                                                                    |                                                          |                                                                                                                                                             |
| <p>1. Depending on the size and severity of a problem, an inspector may evaluate it on-site at the time of an inspection.</p>                                                                                                 | <p>Act 245, 1929, the Water Resources Commission Act</p> | <p>MDNR - Air Quality Division, Resource Recovery Division, Environmental Enforcement Division, Water Quality Division - Groundwater Compliance Section</p> |
| RESOLUTION                                                                                                                                                                                                                    |                                                          |                                                                                                                                                             |
| <p>1. Notifies the facility that an activity is in violation of state statute, and such violation subjects the facility to civil and criminal enforcement action.</p>                                                         | <p>Act 245, 1929, the Water Resources Commission Act</p> | <p>MDNR - Air Quality Division, Resource Recovery Division, Environmental Enforcement Division, Water Quality Division - Groundwater Compliance Section</p> |
| <p>2. Depending on the size and severity of the problem, clean up could be undertaken (e.g. removal of a few barrels, disposal of contaminated soils). Direct referral to Environmental Enforcement Division is possible.</p> |                                                          |                                                                                                                                                             |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, ENGINEERING AND TECHNICAL SERVICES SECTION

ROLES:

| PREVENTION                                                                                                                                         | AUTHORIZATION                                     | COORDINATION                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------|
| 1. Permitting of Groundwater Dischargers<br>Any new or increased uses will be covered by a permit. Existing discharges need to be covered as well. | Act 245, 1929, the Water Resources Commission Act | MDNR - Wastewater Operations Section (formal);<br>Field Operations Section (formal) |
| Procedures -                                                                                                                                       |                                                   |                                                                                     |
| -Application comes to E&TS<br>If complete (including hydrogeological survey information) ETS sends to others for permit development as follows:    |                                                   | Groundwater Compliance and Special Studies Section (informal)                       |
| (a) mobile home and campgrounds - Department of Public Health                                                                                      |                                                   | Geological Survey Division (informal)                                               |
| (b) municipal facilities and condominiums - MDNR Wastewater Operations Section                                                                     |                                                   | MDPH - Mobile Homes and Campgrounds (formal)                                        |
| (c) commercial and industrial facilities - MDNR Water Quality Field staff                                                                          |                                                   | Local Health Departments (informal)                                                 |
|                                                                                                                                                    |                                                   | Environmental Enforcement Division (informal)                                       |

- Permits developed by above listed agencies.
- Proposed permits received and reviewed by ETS
- Proposed permits reviewed by Branch Chief
- Proposed permits presented to WRC for issuance

PREVENTION

AUTHORIZATION

COORDINATION

Types of discharges requiring a permit under Act 245, P.A. 1929 -

- (a) Groundwater Dischargers - Surface Impoundments except for agricultural discharges
- (b) Irrigation of wastewater
- (c) Commercial or industrial septic tank and tile fields (generally >10,000 gpd)
- (d) Liquid industrial waste disposal (hauler, land owner, or industrial source may be permitted.)
- (e) Some dry wells used for disposal
- (f) Some clean up activities related to spills
- (g) Some stormwater discharges
- (h) Road brining as it relates to brine disposal from oil and gas fields requires an approved brine management plan from the governmental unit involved

Whether or not the above discharges are permissible depends on the nature of the proposed discharge and on the results of a hydrogeological study at the discharge site.

#### DETECTION

1. Related to the requirement of a hydrogeologic study prior to permit issuance. Where existing dischargers are requesting permits or at new sites where problems exist this may result in problem detection.
2. Permit limits for groundwater quality related to a variance from a known background quality would allow detection of contamination through regularly required monitoring.

#### RESOLUTION

1. Where there are existing permitted or unpermitted discharges, changes can be made in the permit or permit denials made which could result in problem resolution.

#### AUTHORIZATION

Act 245, 1929, the Water Resources Commission Act

#### COORDINATION

Act 245, 1929, the Water Resources Commission Act

Environmental Enforcement  
Division

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, BIOLOGY SECTION

ROLES:

| EVALUATION                                                                                                       | AUTHORIZATION                                     | COORDINATION                                              |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------|
| 1. Assesses impacts on biota in cases where ground-water inputs or pollutants are transported to surface waters. | Act 245, 1929, the Water Resources Commission Act | MDNR - Resource Recovery Division, Water Quality Division |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, WASTEWATER OPERATIONS SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AUTHORIZATION                                                                                                                                        | COORDINATION                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Develops state groundwater discharge permits to regulate point source discharges to groundwaters from municipal facilities. The WWO Section is involved in developing the format, verbage and content of the permits.</li> <li>2. Provides supervision of facility operations, site inspections and technical assistance to insure groundwater protection. The WWO Section basically observes the overall facility operation, lagoon storage, seepage lagoons and spray irrigation systems.</li> <li>3. Regulates sludge land application rates through groundwater discharge permits as part of the state Municipal Sludge Management Program. The WWO Section decides the agricultural application rates.</li> </ol> | <p>Act 245, 1929, the Water Resources Commission Act</p> <p>P.L. 92-500, 1972, Federal Clean Water Act</p> <p>Act 98, 1913, Sewerage Systems Act</p> | <p>MDNR - Engineering and Technical Services Section, Field Operations</p>                                     |
| DETECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                      | MDNR - Resource Recovery Division (land application disposal rates)                                            |
| <ol style="list-style-type: none"> <li>1. Assesses conditions based on monitoring data and the review of operating reports.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Act 245, 1929, the Water Resources Commission Act                                                                                                    | MDNR - Groundwater Compliance and Special Studies Section                                                      |
| RESOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                      | MDNR - Municipal Design Review Section, Training and Certification Section, Environmental Enforcement Division |
| <ol style="list-style-type: none"> <li>1. Involvement in corrective actions when problems arise at municipal facilities.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Act 245, 1929, the Water Resources Commission Act                                                                                                    |                                                                                                                |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, MUNICIPAL DESIGN REVIEW SECTION

ROLES:

PREVENTION

1. Reviews designs of proposed wastewater treatment systems designed to discharge effluents to groundwaters.
2. Reviews sludge processing and disposal techniques.

AUTHORIZATION

Act 98, 1913, Sewerage System Act  
Act 245, 1929, the Water Resources Commission Act  
P.L. 92-500, 1972, Federal Clean Water Act

COORDINATION

MDNR - Water Quality Division, Environmental Services Division; MDPH; MDOC; MDOT; MDMH; MDSS; MDMB; EPA

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, FACILITIES PLANNING SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                | AUTHORIZATION                             | COORDINATION                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------|
| 1. Reviews facilities plans for wastewater treatment facilities which may dispose of effluent to groundwaters to insure that the plans are environmentally sound, cost-effective and socially acceptable. | P.L. 95-217, Clean Water Act, Section 201 | MDNR - Grants Administration Section |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER QUALITY DIVISION, WATER QUALITY MANAGEMENT PLANNING SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AUTHORIZATION                                           | COORDINATION                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Development of state groundwater management strategy and state water quality management plan.</li><li>2. Works to improve the coordination of activities within and between water quality management programs for the purpose of furthering the protection of groundwater resources.</li><li>3. Provides liaison and coordination of the water quality management program among diverse governmental and non-governmental agencies in an effort to more effectively approach groundwater protection.</li></ol> | P.L. 92-500, 1972, Federal Clean Water Act, Section 208 | MDNR; MDPH; MDA; MDOT; local governmental and non-governmental agencies; the public; EPA |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL SERVICES DIVISION, OFFICE OF TOXIC MATERIALS CONTROL

ROLES:

| PREVENTION                                                                                                                                                                  | AUTHORIZATION                                                                                  | COORDINATION                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 1. Recommends monitoring requirements and discharge limits for state groundwater permits.                                                                                   |                                                                                                |                                                                                                               |
| DETECTION                                                                                                                                                                   |                                                                                                |                                                                                                               |
| 1. Reviews state groundwater permits for toxic materials concerns.                                                                                                          | Act 245, 1929, the Water Resources Commission Act                                              | MDNR - Water Quality Division; MDPH; EPA                                                                      |
| 2. Reviews annual Critical Materials Reports for groundwater discharges and toxic materials.                                                                                | P.L. 94-469, Toxic Substances Control Act                                                      |                                                                                                               |
| EVALUATION                                                                                                                                                                  |                                                                                                |                                                                                                               |
| 1. Provides assessments of the hazards associated with chemicals. Also develops environmental monitoring programs for toxic chemical problems associated with groundwaters. | Act 245, 1929, the Water Resources Commission Act<br>P.L. 94-469, Toxic Substances Control Act | MDNR - Environmental Services Division, Water Quality Division and Resource Recovery Division; MDPH; MDA; EPA |
| RESOLUTION                                                                                                                                                                  |                                                                                                |                                                                                                               |
| 1. Provides technical support for compliance and enforcement actions involving toxic materials.                                                                             | Act 245, 1929, the Water Resources Commission Act                                              | MDNR - Environmental Enforcement Division                                                                     |

2. Reviews groundwater cleanup and treatment plans for efficiency and protection of resources.

GOVERNMENTAL LEVEL: STATE

AGENCY: DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL SERVICES DIVISION, OFFICE OF HAZARDOUS WASTE MANAGEMENT

ROLES:

| PREVENTION                                                                                               | AUTHORIZATION                                | COORDINATION                                                                                         |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1. Works on the development of hazardous waste disposal sites in order to protect groundwater resources. | Act 64, 1979, Hazardous Waste Management Act | MDNR - Resource Recovery Division, Water Quality Division, and Environmental Services Division; MDPH |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL SERVICES DIVISION, POINT SOURCE STUDIES SECTION

ROLES:

DETECTION

1. Groundwater sampling activities and hydrogeologic studies at sites with suspected groundwater contamination problems.
2. Conducts surveys to determine permit compliance of groundwater discharges.

EVALUATION

1. Sampling and hydrogeologic studies at sites with known groundwater contamination problems.

AUTHORIZATION

Act 245, 1929, the Water Resources Commission Act  
P.L. 92-500, 1972, Federal Clean Water Act

COORDINATION

MDNR - Water Quality Districts, Groundwater Compliance Section, Environmental Enforcement Division, Resource Recovery Division, Geological Survey Division

Act 245, 1929, the Water Resources Commission Act

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL ENFORCEMENT DIVISION, PERMIT ENFORCEMENT BRANCH

ROLES:

| RESOLUTION                                                                                                                                                                                                 | AUTHORIZATION                                                               | COORDINATION                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 1. Acts as liaison between the DNR and Department of the Attorney General, and oversees and directs formal enforcement proceedings involving Act 641, Act 98, and permits issued under Act 245.            | Act 641, 1978, Solid Waste Management Act<br>Act 98, 1913, Sewerage Systems | MDNR - Resource Recovery Division; Water Quality Division; Department of Attorney General |
| 2. Screens groundwater cases referred to Environmental Enforcement for administrative, civil, and/or criminal action and refers cases to the appropriate Branch of the Environmental Enforcement Division. | Act 245, 1929, the Water Resources Commission Act                           |                                                                                           |
| 3. Acts as informal advisor on enforcement matters dealing with groundwater problems, NPDES and State Discharge Permits, and Acts 245, 98, and 641.                                                        |                                                                             |                                                                                           |
| 4. Assists in regulatory program development.                                                                                                                                                              |                                                                             |                                                                                           |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL ENFORCEMENT DIVISION, HAZARDOUS WASTE AND LITIGATION BRANCH

ROLES:

RESOLUTION

1. Acts as liaison between the MDNR and the Department of the Attorney General and oversees and directs formal enforcement proceedings involving the following statutes: Act 245 (for facilities not under permit), Act 243, Act 64, and Act 136.
2. Acts as informal advisor on enforcement matters concerning groundwater problems and Acts 245, 243, 64, and 136.
3. Assists in regulatory program development.

AUTHORIZATION

Act 245, 1929, the Water Resources Commission Act

Act 64, 1979, Hazardous Waste Management Act

Act 243, 1951, Servicing of septic tanks, seepage pits, or cesspools

Act 136, 1881, Privies and Water Closets

COORDINATION

MDNR - Water Quality Division; Resource Recovery Division

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL ENFORCEMENT DIVISION, INVESTIGATIONS AND LEGAL SERVICES BRANCH

ROLES:

| RESOLUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | AUTHORIZATION                                     | COORDINATION                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Provide staff assistance and technical expertise in investigation, preparation, and development of cases for criminal, civil, or administrative actions for violations of environmental statutes, rules, orders, and permits; assists the Department of the Attorney General in preparing environmental cases for criminal or civil action.</li><li>2. Coordinates field enforcement activities with the Law Enforcement Division.</li></ol> | Act 245, 1929, the Water Resources Commission Act | MDNR - Water Quality Division; Resource Recovery Division; Department of the Attorney General |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                   | MDNR - Law Enforcement Division                                                               |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL ENFORCEMENT DIVISION, NATURAL RESOURCES PERMIT  
BRANCH

ROLES:

| RESOLUTION                                                                                                                                                                         | AUTHORIZATION                                                                                                   | COORDINATION                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 1. Acts as liaison between the DNR and Department of the Attorney General, and oversees and directs formal enforcement proceedings involving Act 61, Act 315, Act 92, and Act 347. | Act 61, 1939, Oil and Gas Act<br>Act 315, 1969, Mineral Well Act                                                | MDNR - Geological Survey Division; Land Resource Programs Division |
| 2. Acts as informal advisor on enforcement matters concerning Act 61, Act 315, Act 92, and Act 347.                                                                                | Act 92, 1970, Reclamation of Metallic Mining Lands<br>Act 347, 1972, Soil Erosion and Sedimentation Control Act |                                                                    |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, RESOURCE RECOVERY DIVISION, SOLID WASTE MANAGEMENT, ENFORCEMENT AND CONSULTATION SECTION

ROLES:

| PREVENTION                                                                                                                                                                    | AUTHORIZATION                                     | COORDINATION                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 1. Issues construction permits, licenses, and develops priorities for upgrading in accordance with Act 641 in order to regulate landfills so that groundwaters are protected. | Act 641, 1978, Solid Waste Management Act         | MDNR - Water Quality Division; Resource Recovery Commission; EPA; local agencies involved in solid waste plan development. |
| 2. Provides support during formal enforcement proceedings to assure compliance with groundwater criteria.                                                                     | Act 245, 1929, the Water Resources Commission Act | Environmental Enforcement Division                                                                                         |
| DETECTION                                                                                                                                                                     |                                                   |                                                                                                                            |
| 1. Monitors groundwater at landfills to assure compliance with groundwater criteria.                                                                                          | Act 64, 1979, Hazardous Waste Management Act      | MDNR - Environmental Enforcement Division, Water Quality Division; Resource Recovery Commission; local health departments  |
| 2. Performs site inspections.                                                                                                                                                 | Act 641, 1978, Solid Waste Management Act         |                                                                                                                            |
|                                                                                                                                                                               | Act 64, 1979, Hazardous Waste Management Act      |                                                                                                                            |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, RESOURCE RECOVERY DIVISION, GEOLOGY SECTION

ROLES:

PREVENTION

1. Evaluates sites based on data developed regarding area groundwaters.

AUTHORIZATION

Act 641, 1978, Solid Waste Management Act  
P.L. 94-580, Resource Conservation and Recovery Act

COORDINATION

MDNR - Resource Recovery Division

DETECTION

1. Conducts hydrogeological studies to gather information on the impacts of solid and/or hazardous waste disposal sites on groundwater resources.
2. Performs monitoring activities to ascertain the effects of closed and open disposal areas on groundwater quality.

Act 641, 1978, Solid Waste Management Act

Act 64, 1979, Hazardous Waste Management Act

P.L. 94-580, Resource Conservation and Recovery Act

MDNR - Point Source Studies Section

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, WATER MANAGEMENT DIVISION

ROLES:

| DETECTION                                                                                                                                  | AUTHORIZATION                              | COORDINATION                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1. Maintains water withdrawal complaint records.                                                                                           | Bureau chief memo                          | Entire department (MDNR) - all water withdrawal complaints are to be directed to the Water Management Division                    |
| EVALUATION                                                                                                                                 | P.L. 92-500, 1972, Federal Clean Water Act | MDNR - Groundwater Compliance and Special Studies Section; Geology Section (Resource Recovery Division); Groundwater Geology Unit |
| 1. Groundwater modeling - Computer simulation of groundwater flow and pollutant transport. This is used in analyzing groundwater problems. |                                            |                                                                                                                                   |
| 2. Reviews work done by consultants in cases where computer groundwater models are used.                                                   |                                            |                                                                                                                                   |
| RESOLUTION                                                                                                                                 | P.L. 92-500, 1972, Federal Clean Water Act | MDNR - Groundwater Compliance and Special Studies Section; Geology Section (Resource Recovery Division); Groundwater Geology Unit |
| 1. Assesses the impacts of alternative actions through the use of computer models.                                                         |                                            |                                                                                                                                   |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY DIVISION, GROUNDWATER GEOLOGY UNIT

ROLES:

| PREVENTION                                                                                                                                                         | AUTHORIZATION                                             | COORDINATION                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------|
| 1. Acts as a groundwater consultant to state agencies responsible for licensing or issuing permits for land/disposal treatment systems of liquid and solid wastes. | Act 245, 1929, the Water Resources Commission Act         | MDNR; MDPH; MDOT; MDA; U.S.G.S.                                            |
| 2. Assesses the impacts of dredge and fill activities on groundwaters and surface waters, as requested.                                                            | Act 291, 1965, Inland Lakes and Streams Act               | Land Resource Programs Division                                            |
| 3. Coordinates a cooperative groundwater program with the U.S.G.S. in Michigan.                                                                                    | Act 345, 1966, Inland Lake Improvement Act                |                                                                            |
| 4. Provides information to the public regarding the quantity (availability) and quality of the water resources, primarily groundwaters, of the state.              | Act 65, 1869, Board of Geological Survey                  | U.S.G.S.; MDOT; Water Management Division                                  |
|                                                                                                                                                                    | Act 17, 1921, Act Creating the Department of Conservation | MDPH; public                                                               |
| DETECTION                                                                                                                                                          | Act 65, 1869, Board of Geological Survey                  | MDPH; MDNR, other local agencies and units of government; U.S.G.S.; public |
| 1. Develops chemical and yield data for Michigan's glacial and bedrock aquifers.                                                                                   | Act 17, 1921, Act Creating the Department of Conservation |                                                                            |
| 2. Works with MDPH in assessing water supplies.                                                                                                                    | Act 368, 1978, Public Health Code; Part 127               |                                                                            |

| EVALUATION                                                                                                                                            | AUTHORIZATION                                                                          | COORDINATION                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Works with MDPH in assessing water supply problems.                                                                                                | Act 368, 1978, Public Health Code; Part 127                                            | MDPH; MDNR; local health departments; public                                          |
| 2. Assists MDNR agencies in evaluating the design of wells used at department facilities.                                                             | Act 65, 1869, Board of Geological Survey                                               | Engineering Division; Parks Division, Fisheries Division                              |
| 3. Ranks problem groundwater locations as part of a groundwater contamination task force.                                                             | Act 17, 1921, Act creating the Department of Conservation                              | Water Quality Division; Environmental Enforcement Division; MDPH                      |
| 4. Analyzes existing or potential groundwater problems to determine their impacts.                                                                    | Act 245, 1929, the Water Resources Commission Act                                      |                                                                                       |
| 5. Investigates brine contamination associated with oil and gas activities.                                                                           | Act 61, 1939, Oil and Gas Act                                                          | Environmental Enforcement Division; Water Quality Division; Oil and Gas Section; MDPH |
| 1. Provides input into the state groundwater management plan to provide for efficient clean-up and prevention of groundwater contamination incidents. | Act 245, 1929, the Water Resources Commission Act<br><br>Act 61, 1939, Oil and Gas Act | MDNR - Water Quality Division; MDPH                                                   |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY DIVISION, OIL AND GAS SECTION

ROLES:

PREVENTION

1. Issues drilling permits for oil and gas, secondary recovery or pressure maintenance, the storage of dry gas, oil well gas and L.P. gas, and the disposal of saltwater and brines.
2. Works to ensure that wells are equipped to handle the disposal of hydrogen sulfide.

DETECTION

1. Collects geological and drilling data for the making of geological assessments and interpretations.

RESOLUTION

1. Can require corrective action or can shut down illegal operations.

AUTHORIZATION

Act 61, 1939, Oil and Gas Act

Act 61, 1939, Oil and Gas Act

Act 61, 1939, Oil and Gas Act

COORDINATION

MDNR - Water Quality Division

MPDH

MDNR - Environmental Enforcement Division

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF NATURAL RESOURCES, GEOLOGICAL SURVEY DIVISION, MINERAL WELLS SECTION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                                                                                  | AUTHORIZATION                   | COORDINATION                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------|
| 1. Regulates, through the utilization of permits, the drilling, operating and abandoning of mineral wells, test wells, and disposal wells, in order to prevent surface and subsurface waste and contamination, including that of groundwaters. Test wells include foundation borings, geophysical testing holes, mineral exploration wells, cathodic protection wells, groundwater observation/monitoring wells, and geological test wells. | Act 315, 1969, Mineral Well Act | MDNR - Environmental Enforcement Division |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF AGRICULTURE, TOXICS AND EMERGENCY RESPONSE DIVISION

ROLES:

DETECTION

1. Can become involved in sampling for determining the existence of a toxics pollution problem in groundwaters as they relate to agricultural operations.

AUTHORIZATION

Act 116, 1978, the John C. Hertel Toxic Substance Control Commission Act

COORDINATION

TSCC; MDPH; MDNR

EVALUATION

1. Can become involved in evaluating the extent of toxic groundwater pollution problems as they relate to agricultural operations.

Act 116, 1978, the John C. Hertel Toxic Substance Control Commission Act

TSCC; MDPH; MDNR

RESOLUTION

1. Can become involved in designing and implementing activities for the resolution of toxic groundwater pollution problems as they relate to agricultural operations.

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF AGRICULTURE, INTER-COUNTY DRAINS DIVISION

ROLES:

| PREVENTION                                                                                                                                                                            | AUTHORIZATION            | COORDINATION                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------|
| 1. Work with inter-county drainage districts in managing the movement and discharge of drainage waters such that the protection of groundwater quality is given proper consideration. | Act 40, 1956, Drain Code | Inter-county drainage districts; local health departments; MDPH; MDNR |
| RESOLUTION                                                                                                                                                                            |                          |                                                                       |
| 1. Work with inter-county drainage districts in resolving water quality problems as identified by the WRC as resulting from improper drainage conditions.                             | Act 40, 1956, Drain Code | Inter-county drainage districts; MDNR                                 |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF AGRICULTURE, SOIL AND WATER CONSERVATION DIVISION

ROLES:

PREVENTION

1. Coordinate the activities of Michigan's 83 soil conservation districts whose programs deal with land and related resource management. Through these programs, individual land users are assisted in developing plans of operations for animal waste irrigation and land drainage systems which directly relate to groundwater. The division promotes utilization of this planning assistance.

AUTHORIZATION

Act 297, 1937, Soil Conservation Districts Law

COORDINATION

Local S.C.D.'s; MDNR

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF AGRICULTURE, PLANT INDUSTRY DIVISION

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                   | AUTHORIZATION                               | COORDINATION      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------|
| <ol style="list-style-type: none"><li>1. Register pesticides regarding which ones can be sold and how they should be applied and/or disposed of. One of the criteria to be examined in proposing restrictions is the effect that usage of the pesticides may have on groundwater quality.</li></ol>                          | <p>Act 171, 1976, Pesticide Control Act</p> | <p>MDNR; MDPH</p> |
| <ol style="list-style-type: none"><li>2. Licensing and certification of pesticide applicators involving education on the proper use of pesticides to avoid contamination, spill management and disposal.</li><li>3. Pesticide use monitoring to ensure the proper application and handling of pesticide chemicals.</li></ol> |                                             |                   |
| DETECTION                                                                                                                                                                                                                                                                                                                    |                                             |                   |
| <ol style="list-style-type: none"><li>1. Pesticide use monitoring may identify groundwater contamination problems.</li></ol>                                                                                                                                                                                                 | <p>Act 171, 1976, Pesticide Control Act</p> |                   |
| RESOLUTION                                                                                                                                                                                                                                                                                                                   |                                             |                   |
| <ol style="list-style-type: none"><li>1. Applicator education - certification books and examinations are updated with changes brought about by technology, new products, and needed changes in application.</li></ol>                                                                                                        | <p>Act 171, 1976, Pesticide Control Act</p> | <p>MDPH</p>       |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF PUBLIC HEALTH, CHEMICALS AND HEALTH CENTER

ROLES:

DETECTION

1. Monitors and evaluates conditions which represent potential and actual environmental health hazards. Findings are reported to appropriate state and local agencies, and to the public as necessary.

AUTHORIZATION

Act 368, 1978, Article 12, Part 121, Public Health Code

COORDINATION

MDNR; EPA; MDA; other agencies in MDPH; local health departments; local governments; public

EVALUATION

1. Monitors and coordinates the activities of agencies involved in sampling and/or clean-up efforts involving contamination incidents that endanger the public health.

Act 368, 1978, Article 12, Part 121, Public Health Code

MDNR; EPA, MDA; other agencies in MDPH; local health departments; local governments; public

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF PUBLIC HEALTH, ENVIRONMENTAL EPIDEMIOLOGY

ROLES:

| EVALUATION                                                                                                                                  | AUTHORIZATION                     | COORDINATION                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. Evaluates the potential for human health problems which occur as a result of the entry of chemical contaminants into the environment.    | Act 368, 1978, Public Health Code | MDPH - Chemicals and Health Center, Water Supply Division; MDNR; federal agencies and research institutions |
| RESOLUTION                                                                                                                                  | Act 368, 1978, Public Health Code | MDPH - Chemicals and Health Center, Water Supply Division; MDNR                                             |
| 1. Makes recommendations regarding the risk involved in using an affected water supply. Various reasonable alternatives are also presented. |                                   |                                                                                                             |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF PUBLIC HEALTH, WATER SUPPLY DIVISION

ROLES:

PREVENTION

1. Registration of water well drillers.
2. Ensures that private wells are properly installed, constructed and abandoned.
3. Helps ensure the proper isolation, construction and abandonment of public wells by reviewing construction plans and specifications, and issuing permits prior to construction of any new or modified groundwater sources.

DETECTION

1. Complaint response (public and private supplies).
2. Record keeping for public and private supplies (well logs, operation reports, inventory, monitoring history).

AUTHORIZATION

Part 127 of the Public Health Code, Act 368, 1978  
  
Act 399, 1976, Safe Drinking Water Act

COORDINATION

Local Health Departments (some have well permit programs)  
  
Local Health Departments  
  
Local Health Departments

1. Complaint response (public and private supplies).

Local Health Departments;  
MDPH laboratory

Part 127 of the Public Health Code, Act 368, 1978

Geological Survey Division;  
Well drilling contractors

| DETECTION                                                                                                                                                                                                                                                                                                                     | AUTHORIZATION                               | COORDINATION                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <p>3. Site inspections (public and private supplies - Performs routine annual inspections of all community public water supplies and sanitary surveys of non-community water supplies every 3-5 years. Well site inspections are performed for both community and non-community water supplies as new wells are proposed.</p> |                                             | Local Health Departments                                                                                          |
| <p>4. Monitoring</p> <p>a. Routine (public supplies) - Frequencies and parameters are established to ensure compliance with state drinking water standards.</p> <p>b. Complaint (private and public supplies).</p> <p>c. Test well (analyses are required prior to approval of production wells for public supplies).</p>     |                                             | Local Health Departments;<br>Groundwater Compliance<br>and Special Studies Section                                |
| EVALUATION                                                                                                                                                                                                                                                                                                                    |                                             |                                                                                                                   |
| <p>1. Investigation of known and/or suspected contamination sites by the Groundwater Quality Control Section.</p> <p>2. Evaluation of new public well(s), particularly if the desired withdrawal is near aquifer capacity. Pump tests are usually done in all cases.</p>                                                      | Part 127, Public Health Code, Act 368, 1978 | Resource Recovery Division;<br>Groundwater Compliance and<br>Special Studies Section;<br>Local Health Departments |
| RESOLUTION                                                                                                                                                                                                                                                                                                                    |                                             |                                                                                                                   |
| <p>1. For private wells - recommend against continued use of well(s) and work to get an alternate supply to the affected area.</p>                                                                                                                                                                                            | Part 127, Public Health Code, Act 368, 1978 | MDNR; public and local agencies (are notified of the problem and the public health concerns)                      |

| RESOLUTION                                                                                                                                                                                                                                                                                                                                                                                              | AUTHORIZATION                                 | COORDINATION                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <p>2. For public wells -</p> <p>a. If a drinking water standard is exceeded, or contamination is confirmed, the public health risk is evaluated and correction of the problem is pursued.</p> <p>b. Affected well(s) generally can be taken off the system through cooperative effort. If a real, short-term hazard is involved, legal action may be taken to shut down the well(s) when necessary.</p> | <p>Act 399, 1976, Safe Drinking Water Act</p> | <p>MDNR; public and local agencies (are notified of the problem and the public health concerns)</p> |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN DEPARTMENT OF PUBLIC HEALTH, COMMUNITY ENVIRONMENTAL HEALTH DIVISION

ROLES:

PREVENTION

1. Provides plan review for sewage treatment facilities at mobile home parks and campgrounds.
2. Drafts permits for groundwater discharges other than through tile fields, for mobile home parks and campgrounds.
3. Reviews school facilities to ensure that requirements for on-site water and sewage systems are met.

DETECTION

1. Participates in surveillance activities regarding on-site water and sewage systems at mobile home parks and campgrounds.

AUTHORIZATION

Act 419, 1976, Mobile Home Commission Act  
  
Act 368, 1978, Public Health Code  
  
Act 306, 1937, School Construction Act  
  
Act 98, 1913, Sewerage Systems Act  
  
Act 288, 1967, Subdivision Control Act

COORDINATION

Groundwater Compliance and Special Studies Section, Engineering and Technical Services Section

Environmental Enforcement Division

Act 419, 1976, Mobile Home Commission Act

Act 368, 1978, Public Health Code

Act 306, 1937, School Construction Act

Act 98, 1913, Sewerage Systems Act

Act 288, 1967, Subdivision Control Act

| EVALUATION                                                                                                                           | AUTHORIZATION                                                                                                                                                                                                            | COORDINATION                       |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| 1. Evaluates the public health impacts of problems concerning on-site water and sewage systems at mobile home parks and campgrounds. | Act 419, 1976, Mobile Home Commission Act<br><br>Act 368, 1978, Public Health Code<br><br>Act 306, 1937, School Construction Act<br><br>Act 98, 1913, Sewerage Systems Act<br><br>Act 288, 1967, Subdivision Control Act | MDPH - Water Supply Division       |
| RESOLUTION                                                                                                                           | Act 419, 1976, Mobile Home Commission Act<br><br>Act 368, 1978, Public Health Code<br><br>Act 306, 1937, School Construction Act<br><br>Act 98, 1913, Sewerage Systems Act<br><br>Act 288, 1967, Subdivision Control Act | Environmental Enforcement Division |
| 1. Participates in groundwater permit enforcement activities.                                                                        |                                                                                                                                                                                                                          |                                    |

GOVERNMENTAL LEVEL: STATE

AGENCY: MICHIGAN STATE POLICE - FIRE MARSHAL DIVISION

ROLES:

| PREVENTION                                                                                                                                                    | AUTHORIZATION                                            | COORDINATION                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------|
| 1. Inspects aboveground storage of Class I & II flammable liquids exceeding 1,000 gals. and Class III flammable liquids exceeding 10,000 gals.                | 1973 Michigan Flammable Liquids Regulations              | Local fire departments                            |
| 2. Assists in rule promulgation for aboveground and underground storage of flammable liquids.                                                                 | Michigan Fire Prevention Code, Act 207, 1941, as amended | Local and state enforcement agencies and industry |
| 3. Enforces Flammable Liquids Regulations.                                                                                                                    | Michigan Fire Prevention Code, Act 207, 1941, as amended | County Prosecutors                                |
| 4. Trains local fire inspectors on flammable liquid storage requirements.                                                                                     |                                                          | Local fire departments                            |
| 5. Provides consultation to local fire officials on the proper installation of underground tanks.                                                             |                                                          | Local fire departments                            |
| 1. Investigates fires, explosions, spills, leaks, or accidents involving the transportation of flammable liquids or aboveground storage of flammable liquids. | Michigan Fire Prevention Code, Act 207, 1941, as amended | Local fire chief and other enforcement agencies   |

| DETECTION  |                                                                                        |
|------------|----------------------------------------------------------------------------------------|
| 2.         | Assists local fire officials in the investigation of underground leaking tanks/piping. |
| EVALUATION |                                                                                        |
| 1.         | Investigates fire hazards.                                                             |
| RESOLUTION |                                                                                        |
| 1.         | Pursues court action if fire hazard is not abated.                                     |

| AUTHORIZATION                                            | COORDINATION           |
|----------------------------------------------------------|------------------------|
| Michigan Fire Prevention Code, Act 207, 1941, as amended | Local fire departments |
| Michigan Fire Prevention Code, Act 207, 1941, as amended | Local fire officials   |
| Michigan Fire Prevention Code, Act 207, 1941, as amended | County Prosecutors     |

GOVERNMENTAL LEVEL: FEDERAL

AGENCY: ENVIRONMENTAL PROTECTION AGENCY

ROLES:

PREVENTION

1. Administers state program grants to develop hazardous waste controls and solid waste management plans.
2. Administers state program grants to develop underground injection control programs.
3. Administers state and local 208 WQM grants to develop programs to implement BMP's (Best Management Practices) for nonpoint source controls.
4. Administers state 106 program grants for WQM program administration.
5. Administers local 201 program grants for on-lot, I/I (Infiltration/Inflow) and facilities planning.
6. Develops BMP's criteria for industrial operations including industrial stockpiles, BPT (Best Practiced Treatment) criteria for petroleum, mining and all industrial point discharges for establishing NPDES (National Pollutant Discharge Elimination System) permit conditions.
7. Develops drinking water standards and water quality standards.
8. Develops toxics criteria and criteria for hazardous wastes.
9. Develops standards and BMP's for milling facilities dealing with radioactive material.

AUTHORIZATION

P.L. 92-500, 1972, Federal Clean Water Act  
P.L. 95-217, Federal Clean Water Act (Amendments)  
P.L. 94-580, 1976, Resource Conservation and Recovery Act  
P.L. 93-523, 1974, Federal Safe Drinking Water Act

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                           | AUTHORIZATION                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>10. Registers and labels pesticides regarding their proper usage.</li> <li>11. Certifies pesticide applicators.</li> <li>12. Develops standards and criteria for the manufacture of toxic substances.</li> <li>13. Permits UIC and RCRA for non-primary States.</li> </ol>                                                                    | <p>P.L. 94-580, 1976, Resource Conservation and Recovery Act</p> <p>P.L. 95-217, 1972, Federal Clean Water Act Amendments.</p> |
| DETECTION                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                |
| <ol style="list-style-type: none"> <li>1. Management oversight - underground injection control primary.</li> <li>2. Management oversight - RCRA delegation.</li> </ol>                                                                                                                                                                                                               | <p>P.L. 95-217, 1972, Federal Clean Water Act Amendments</p> <p>P.L. 94-580, 1976, Resource Conservation and Recovery Act</p>  |
| EVALUATION                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                |
| <ol style="list-style-type: none"> <li>1. Administers surface impoundment assessment, open dump inventory, and abandoned dump site program.</li> <li>2. Designates sole source aquifers and assesses the impacts of federally funded projects.</li> <li>3. Evaluates environmental impact statements regarding radioactive materials generated during milling operations.</li> </ol> |                                                                                                                                |
| RESOLUTION                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                |
| <ol style="list-style-type: none"> <li>1. Responsible for issuance and enforcement of NPDES permits for all point source dischargers in non-NPDES state.</li> </ol>                                                                                                                                                                                                                  | <p>P.L. 92-500, 1972, Federal Clean Water Act</p>                                                                              |

RESOLUTION

2. Responsible for emergency response to pollution incidents.
3. Provides construction grants to build treatment facilities to correct environmental pollution situations.
4. Involved in the establishment of a superfund to rehabilitate hazardous waste sites.
5. Responds to pollution incidents involving abandoned hazardous waste disposal sites and the closing down of illegal dumps.

AUTHORIZATION

P.L. 94-580, 1976, Resource Conservation and Recovery Act

GOVERNMENTAL LEVEL: FEDERAL - DEPARTMENT OF THE INTERIOR

AGENCY: OFFICE OF SURFACE MINING

ROLES:

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PREVENTION

1. Provides monies for developing and operating a State regulatory program for coal mining and for the reclamation of abandoned mines.
2. Regulates mining within areas of the National Park System.

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AUTHORIZATION

Appalachian Regional Development Act of 1975, 40 app. U.S.C. 205

National Park System Mining Activity Regulation, P.L. 94-429

Water Resources Research Act, 42 U.S.C., 1961-61c-8

Saline Water Conservation Act of 1971, 42 U.S.C. 1959-1959h

Surface Mining Control and Reclamation Act, 30 U.S.C. 1201

GOVERNMENTAL LEVEL: FEDERAL

AGENCY: OFFICE OF WATER RESEARCH AND TECHNOLOGY

ROLES:

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EVALUATION

1. Provides competitive annual funding allotments for the support of state water resources centers. Projects provide training to water scientists, engineers, and others through their on-the-job participation in research work.

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AUTHORIZATION

P.L. 95-467, 1978, Water Research and Development Act

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RESOLUTION

1. Seeks to develop thorough research, new technology and more effective methods for resolving local, state and nationwide water resources problems.

GOVERNMENTAL LEVEL: FEDERAL-DEPARTMENT OF THE INTERIOR

AGENCY: U.S. GEOLOGICAL SURVEY

ROLES:

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EVALUATION

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AUTHORIZATION

1. Evaluates aquifer geological characteristics, delineating aquifers on maps and quantifying the water budget.
2. Conducts background monitoring of aquifers on a limited basis.
3. Has initiated a Regional Aquifer System Analysis Program (RASA).
4. Collects and analyzes basic data and prepares interpretive reports.

Act of March 3, 1879, 43 U.S.C. 31

GOVERNMENTAL LEVEL: FEDERAL - DEPARTMENT OF THE INTERIOR

AGENCY: BUREAU OF LAND MANAGEMENT

ROLES:

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PREVENTION

1. Land management techniques can determine the levels to which the quality of underlying groundwater aquifers is protected.

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AUTHORIZATION

Federal Land Policy and Management Act, P.L.  
94-579

Outer Continental Shelf Lands Act, 43 U.S.C.  
1334 and 1346

GOVERNMENTAL LEVEL: FEDERAL - U.S. DEPARTMENT OF DEFENSE

AGENCY: ARMY CORPS OF ENGINEERS

ROLES:

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PREVENTION

1. Issues permits for the discharge of dredge or fill materials into the waters of the United States at specified disposal sites.
2. Involved in the development of hydrologic modifications in U.S. Navigable waterways.

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AUTHORIZATION

P.L. 92-500, 1972, Federal Clean Water Act  
Marine Protection, Research and Sanctuaries  
Act, 33 U.S.C. 1401  
River and Harbor Act of 1899, 33 U.S.C. 401,  
403

GOVERNMENTAL LEVEL: FEDERAL

AGENCY: WATER RESOURCES COUNCIL

ROLES:

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PREVENTION

1. Administers studies, river basin commission comprehensive planning efforts and the Title III grant program to the States.

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AUTHORIZATION

P.L. 89-80, Federal Water Resources Planning Act

GOVERNMENTAL LEVEL: FEDERAL

AGENCY: U.S. DEPARTMENT OF AGRICULTURE

ROLES:

#### PREVENTION

1. Provides funding through the Agriculture Conservation Program (ACP) and Rural Clean Water Program (RCWP) as well as technical resources through the Soil Conservation Service (SCS) to implement best management practices (BMP's) to protect groundwater quality.
2. Administers rural abandoned mine cost-sharing program through SCS.
3. Provides funding for groundwater research.
4. Provides detailed soil maps through the SCS.
5. Promotes improved groundwater quality through the installation of soil erosion control, water conservation, and best management practices.
6. Promotes water conservation practices so that water infiltration into the soil is increased, resulting in a beneficial effect on groundwater recharge.

#### AUTHORIZATION

P.L. 95-217, 1972, Federal Clean Water Act Amendments  
Federal Assistance, Resources Conservation and Development Projects 7 U.S.C. 1010-1013  
Water Bank Act 16 U.S.C. 1301-1311  
Fish & Wildlife Conservation at Small Watershed Projects 16 U.S.C. 1001-1009  
Resource Conservation & Development Program 7 U.S.C. 1010  
Soil & Water Conservation Act of 1977 16 U.S.C. 2001  
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001  
Agricultural Credit for Pollution Control, 7 U.S.C. 1921-1926, 1932.

GOVERNMENTAL LEVEL: LOCAL

AGENCY: REGIONAL PLANNING AGENCIES

ROLES:

PREVENTION

1. Works with local units of government to incorporate groundwater protection strategies into local planning/zoning/development efforts.
2. May identify and encourage implementation of Best Management Practices for non-point source pollution problems with potential to contaminate groundwater (e.g. agricultural practices, urban runoff).
3. Identifies and verifies the location of groundwater recharge areas.
4. Provides technical planning assistance (may involve zoning, water quality, and solid waste concerns).
5. Provides information and educational services to the public.

DETECTION

1. Records groundwater quality data.
2. Provides referral of groundwater quality and/or quantity complaints.
3. May provide monitoring or site investigations upon request.

AUTHORIZATION

P.L. 92-500, 1972, Federal Clean Water Act, Section 208  
  
Act 281, 1945, Act to provide for regional planning  
  
Act 641, 1978, Solid Waste Management Act

COORDINATION

EPA; MDNR; MDPH; local health departments; local planning commissions

P.L. 92-500, 1972, Federal Clean Water Act, Section 208

MDNR; MDPH; local health departments; local units of government

Act 281, 1945, Act to provide for regional planning

| EVALUATION                                                                                                                                                                                                                                                                                                                                                            | AUTHORIZATION                                                                                                             | COORDINATION                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Evaluates alternative strategies for clean-up and future protection of groundwater.</li> <li>2. Performs environmental impact analyses.</li> </ol>                                                                                                                                                                          | <p>P.L. 92-500, 1972, Federal Clean Water Act, Section 208</p> <p>Act 281, 1945, Act to provide for regional planning</p> | <p>MDNR; MDPH, local health departments</p> |
| RESOLUTION                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                           |                                             |
| <ol style="list-style-type: none"> <li>1. Encourages the implementation of groundwater protection strategies which may also correct existing problems.</li> <li>2. Provides referral assistance (makes contacts, provides support, helps resolve conflicts).</li> <li>3. May provide assistance in searching for funding sources for affected local units.</li> </ol> | <p>P.L. 92-500, 1972, Federal Clean Water Act, Section 208</p> <p>Act 281, 1945, Act to provide for regional planning</p> | <p>Local units of government</p>            |

GOVERNMENTAL LEVEL: COUNTY

AGENCY: COUNTY DRAIN COMMISSION AND/OR BOARD OF PUBLIC WORKS (EXAMPLE)

ROLES:

| PREVENTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AUTHORIZATION                                                                                          | COORDINATION                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Acts as lead applicant for localities in the wastewater treatment construction grants program. Provides the bonding capability of the county for the planning, design, and construction of wastewater treatment works. Can prevent groundwater contamination through selection of treatment system and sludge disposal techniques. Eliminates on-site systems. Can provide for recharge.</li><li>2. May participate in solid waste management planning and waste stream analysis for the county. This will lead to the determination of appropriate waste disposal and resource recovery techniques which provide groundwater quality protection.</li><li>3. May cooperate with regional planning agencies on locating groundwater recharge areas and providing for their protection.</li></ol> | <p>Act 342, 1939, County Public Improvements Act</p> <p>P.L. 92-500, 1972, Federal Clean Water Act</p> | <p>Local governments; public; local health departments; MDNR; EPA</p> |
| DETECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>General water management concerns</p>                                                               | <p>Local governments; public; MDNR; EPA; local health departments</p> |
| <ol style="list-style-type: none"><li>1. May become involved in detection of groundwater problems through the construction grants program.</li></ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Act 342, 1939, County Public Improvements Act</p> <p>P.L. 92-500, 1972, Federal Clean Water Act</p> | <p>Local governments; health departments; MDNR; EPA; public</p>       |

| EVALUATION                                                                                                                                                               | AUTHORIZATION                                                                                        | COORDINATION                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <p>1. The planning step in the construction grants program could involve the commission or board in evaluating groundwater contamination problems.</p>                   | <p>Act 342, 1939, County Public Improvements Act<br/>P.L. 92-500, 1972, Federal Clean Water Act.</p> | <p>Local governments; health departments; MDNR; EPA; public</p> |
| RESOLUTION                                                                                                                                                               |                                                                                                      |                                                                 |
| <p>1. Participation in the construction grants program can lead to the elimination of sources of groundwater contamination or supply recharge for depleted aquifers.</p> | <p>Act 342, 1939, County Public Improvements Act<br/>P.L. 92-500, 1972, Federal Clean Water Act</p>  | <p>Local governments; health departments; MDNR; EPA, public</p> |

GOVERNMENTAL LEVEL: COUNTY AND MULTIPLE COUNTY DISTRICTS

AGENCY: LOCAL HEALTH DEPARTMENTS

ROLES:

| PREVENTION                                                                                                                                                                                                                                                 | AUTHORIZATION                                                                                                                                             | COORDINATION                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <p>1. Issues permits for private and public (Type II &amp; III) water supply wells. Inspects and samples new wells installed under the permits. (Construction stipulations may be made on the permits) Agricultural irrigation wells are not included.</p> | <p>Act 368, 1978; Public Health Code, Part 127 - Water Supply and Sewage systems</p> <p>District rules governing water supplies; county sanitary code</p> | MDPH                                                                           |
| <p>2. Issues permits for on-site systems to ensure proper wastewater disposal and adequate isolation from water supplies. Also promotes, supports and advocates community wastewater management plans.</p>                                                 | <p>Act 399, 1976, Safe Drinking Water Act</p> <p>District Rules governing sewage disposal</p> <p>Act 245, 1929, the Water Resources Commission Act</p>    | MDPH; MDNR; WRC                                                                |
| <p>3. Participates in planning for solid waste</p>                                                                                                                                                                                                         | <p>WRC Policy Statement 9/22/77</p> <p>Act 641, 1979, Solid Waste Management Act</p>                                                                      | MDNR; Regional Planning Commissions; county and municipal agencies             |
| <p>4. Works on identification and mapping of aquifers, sensitive areas, municipal wells, and existing and potential sources of groundwater contamination. Tries to assess land developments which may impact sensitive areas.</p>                          | County Sanitary Code                                                                                                                                      | MDNR; MDPH, Regional Planning Commissions; municipalities; zoning boards; USGS |

| PREVENTION                                                                                                                                                                                                   | AUTHORIZATION                                                           | COORDINATION                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------|
| 5. Education for homeowners, builders and developers on location and method of subsurface sewage disposal.                                                                                                   | County Sanitary Codes                                                   | MDPH                                                           |
| 6. Review of seepage disposal sites.                                                                                                                                                                         | Act 243, 1951, Servicing of Septic Tanks, Seepage Pits or Cesspools     | MDNR; Septic tank cleaners                                     |
| DETECTION                                                                                                                                                                                                    |                                                                         |                                                                |
| 1. Random sampling of private and public (Type II and III) wells.                                                                                                                                            | District rules governing water supply                                   | MDPH - Bureau of Laboratories                                  |
| 2. Performs nuisance complaint investigations in a variety of areas concerning the public's health, including but not limited to: sewage disposal, refuse disposal, hazardous waste handling, air pollution. | Act 399, 1976, Safe Drinking Water Act                                  | MDPH; MDA                                                      |
| 3. Review of applications for discharge permits and monitoring well data.                                                                                                                                    | Act 368, 1978, Public Health Code, Section 2433                         | MDNR; MDPH, Zoning boards; other county and municipal agencies |
| 4. Monitors public water supplies.                                                                                                                                                                           | District Rules governing water supply, sewage disposal, refuse disposal | MDPH                                                           |
| 5. Performs site inspections, including solid waste disposal sites.                                                                                                                                          | County Sanitary Code                                                    | MDPH; MDNR                                                     |
|                                                                                                                                                                                                              | Act 399, 1976, Safe Drinking Water Act                                  |                                                                |
|                                                                                                                                                                                                              | Local Sanitary Code                                                     |                                                                |
|                                                                                                                                                                                                              | Act 641, 1979, Solid Waste Management Act                               |                                                                |
|                                                                                                                                                                                                              | Act 399, 1976, Safe Drinking Water Act                                  |                                                                |

# EVALUATION

1. Specific sampling of private water wells, type II and III public water supplies, and surface water supplies in response to a known or suspected groundwater contamination problem.
2. Monitoring and assessment of public health impacts.
3. Performs plan reviews and site approvals for landfills.

# RESOLUTION

1. In cases of "imminent danger" immediate action to avoid, correct or remove the situation can be taken by the health officer.
2. Can require correction of any activity violating the County Sanitary Code. Through use of the "public nuisance clause" this can be applied to most any activity that would threaten a water supply. Generally, cases under direct state authority are referred to the appropriate state agency.
3. Septic sludge disposal enforcement actions- results in the elimination of land dumping sites.

# COORDINATION

District Rules governing water supply and sewage disposal

Act 368, 1978, Public Health Code, Section 2433

Act 641, 1979, Solid Waste Management Act

Act 368, 1978, Public Health Code, Section 2451

District Rules

Local Health Code, Act 243, 1951, Servicing of Septic Tanks, Seepage Pits, or Cess-pools

MDPH - Bureau of Laboratories

MDPH - Bureau of Laboratories

MDNR

State Police County Emergency Coordinator; MDPH

MDNR

GOVERNMENTAL LEVEL: CITY

AGENCY: MUNICIPAL WATER SUPPLY AGENCY (EXAMPLE)

ROLES:

#### PREVENTION

1. Works with state, county and municipal agencies relative to approving or disapproving proposed landfill or waste disposal locations and methods near metropolitan areas, as they pertain to potential future municipal water supply areas and groundwater flow directions and availability.

2. Placement of new wells - attempts to avoid competition with other wells through analysis of cones of depression via a groundwater model.

3. Works with the city to preserve and utilize primary recharge areas within the city.

#### DETECTION

1. Tests municipal wells yearly to determine quality and to determine which wells are the cheapest to chemically treat for the purpose of minimizing operating costs.

#### AUTHORIZATION

City Charter

#### COORDINATION

Inter-departmental communications with state and local health departments; MDNR, Michigan Geological Survey; USGS; Regional Planning Commissions; City Planning Departments; City Public Service Departments; various county departments, etc.

Regional Planning Commissions; other surrounding municipal governments

Regional Planning Commissions; City Planning Department; various county departments.

MDPH; County Health Department; MDNR

City Charter

Act 399, 1976, Safe Drinking Water Act

#### DETECTION

2. On-going modeling efforts can detect potential supply problems.

#### AUTHORIZATION

#### COORDINATION

Regional Planning Commissions; MDNR; other surrounding units of government

#### EVALUATION

1. Chemical monitoring of wells; continuous refinement of computer aquifer models used primarily as planning and operating management tools for aquifer development and control; ongoing geological assessment of the area relative to future water supply development; ongoing hydrograph monitoring program of specific observation wells with the USGS.

City Charter

Working with regional planning commissions, USGS, and State and local health departments relative to compiling updated regional groundwater data for computer programming

#### RESOLUTION

1. When a problem is identified as to probable cause, notification of the local health department having jurisdiction is made which provides a communication link with MDPH and MDNR agencies as well as with proper local agencies for eventual resolution of the problem.

City Charter

Provides data and information to various agencies; provides municipal support for enforcement and corrective actions to agencies such as local health departments, MDPH and MDNR

GOVERNMENTAL LEVEL: LOCAL

AGENCY: TOWNSHIPS

ROLES:

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PREVENTION

1. Zoning Ordinances; Regulatory Ordinances

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AUTHORIZATION

Act 184, 1943, Township Rural Zoning Act  
Act 168, 1959, Township Planning Act  
Act 246, 1945, Township Ordinances Act  
Act 359, 1947, Charter Townships Act

GOVERNMENTAL LEVEL: LOCAL

AGENCY: COUNTY BOARD OF COMMISSIONERS

ROLES:

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PREVENTION

1. Zoning Ordinances; Regulatory Ordinances.

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AUTHORIZATION

Act 282, 1945, County Planning Act

Act 183, 1943, County Rural Zoning Enabling Act

Act 293, 1966, Enabling Act for Charter Townships

GOVERNMENTAL LEVEL: STATE COMMISSION

AGENCY: TOXIC SUBSTANCE CONTROL COMMISSION

ROLES:

PREVENTION

1. Investigates and compiles data not available under the federal toxic substance control act relative to the health, safety or environmental testing programs and commercial distribution of a product containing a toxic substance sold or to be sold in the state.

DETECTION

1. Investigates all reports, problems or irregularities which involve a toxic substance or could involve a toxic substance, including illnesses or abnormalities in animal or human behavior, or plant development. This investigation is conducted when a state agency or department fails to make the necessary investigation, or when there is a lack of understanding as to which department or agency is responsible for making the investigation.

EVALUATION

1. Alerts the governor and the legislature when a potential toxic substance problem has been identified, and coordinates, assists and monitors the investigation and evaluation of the potential problem by a state agency. The commission provides periodic reports of the progress being made in the evaluation of the problem to the governor and the legislature.

AUTHORIZATION

Act 116, 1978, The John C. Hertel Toxic Substance Control Commission Act

Act 116, 1978, The John C. Hertel Toxic Substance Control Commission Act

Act 116, 1978, the John C. Hertel Toxic Substance Control Commission Act

COORDINATION

Numerous state agencies involved in toxic substance incidents

Numerous state agencies involved in toxic substance incidents

## RESOLUTION

## AUTHORIZATION

## COORDINATION

1. Declares a toxic substance emergency upon a vote of 2/3 of the voting members. When the declaration is signed by the governor, a toxic substance emergency exists. When this occurs, the commission:

- a.) makes all decisions regarding the sale, use and method of disposal of the identified toxic substance in this state.
  - b.) promulgates rules
  - c.) Designates a state agency as lead agency, monitors the activities of this designated agency, and reports to the governor and legislator on these activities.
2. Coordinates the activities of all state agencies involved in a toxic substance emergency.
3. Centralizes, collects, monitors and disseminates information on the existence, manufacture, use, and disposal of the identified toxic substances and make recommendations for the appropriate state agency to be responsible for the regulation of these toxic substances.

4. The Commission may issue orders to persons to prohibit the distribution, use, or dissemination of the identified toxic substances.

Numerous state agencies involved in toxic substance incidents

Numerous state agencies involved in toxic substance incidents

GOVERNMENTAL LEVEL: STATE COMMISSION

AGENCY: WATER RESOURCES COMMISSION

ROLES:

PREVENTION

1. Establishes pollutant restrictions and conditions in permits for discharges to the ground, in addition to compliance schedules and self-monitoring requirements.
2. Requires by rule and permit, the preparation of Pollution Incident Prevention Plans (PIPPs) and storage facilities to assure proper handling of critical pollutants.
3. Promulgates groundwater quality standards.

RESOLUTION

1. Revokes, denies and reissues permits.
2. Holds hearings and conferences bearing on permit actions.

AUTHORIZATION

Act 245, 1929, The Water Resources Commission Act

COORDINATION

Numerous state agencies; municipalities; industries

Act 245, 1929, The Water Resources Commission Act

GOVERNMENTAL LEVEL: STATE COMMISSION

AGENCY: DEPARTMENT OF COMMERCE, MICHIGAN PUBLIC SERVICE COMMISSION

ROLES:

| PREVENTION                                                                                                            | AUTHORIZATION                                           | COORDINATION                |
|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------|
| 1. Regulates the production, purchase, and sale of natural gas and the utilities transporting it.                     | Act 9, 1929, Natural Gas                                | (in selected cases)<br>MDNR |
| 2. Regulates gas, oil and brine lines for hire within the state.                                                      | Act 16, 1929, Oil, Gas and Brine Lines                  | MDNR                        |
| 3. Certifies Public Convenience and Necessity for gas and electric utilities facilities.                              | Act 69, 1929, Certificates of Convenience and Necessity |                             |
| 4. Establishes and enforces gas safety standards.                                                                     | Act 165, 1969, Gas Safety Standards                     | MDPH                        |
| 5. Provides environmental review and prepares Environmental Impact Statements for pipelines under their jurisdiction. | Executive Order 1974-4                                  | MDNR                        |

GOVERNMENTAL LEVEL: STATE COMMISSION

AGENCY: NATURAL RESOURCES COMMISSION

ROLES:

PREVENTION

1. Sets departmental policy for the conservation and preservation of the state's natural resources, including groundwaters.
2. Provides for the protection of persons and property through the protection of land resources and land/water interfaces in the state, and the maintenance of the state's water quality.
3. Provides for the health of Michigan citizens through the prevention of pollution and the prevention of health hazards in liquid and solid waste.
4. Integrates environmental preservation programs with state economic development programs through state land resource planning and utilization, and water resources planning and management.

AUTHORIZATION

Act 17, 1921, Department of Conservation Act - and subsequent Executive Organization Act, Act 380, 1965

COORDINATION

State agencies, municipalities, industries

ASSESSMENT OF  
LEGAL AUTHORITY  
FOR  
GROUNDWATER MANAGEMENT

| Pollutant Source                                                                            | Legal Authority                                                                                                                                                                                                                                                                                      | Is the authority adequate? | Remarks                                             |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------------|
| Landfills and Dumps<br>*Municipal<br>*Commercial & Industrial<br>*Agricultural<br>*Mining   | P.L. 94-580, Resource Conservation and Recovery Act (Subtitle C - Hazardous Wastes)<br><br>Act 245, 1929, Water Resources Commission Act (for leachate and runoff)<br><br>Act 641, 1978, Solid Waste Management Act<br><br>Act 64, 1979, Hazardous Waste Management Act                              | YES                        | The monetary penalty for violation of Act 98 is low |
| Pits, Ponds & Lagoons<br>*Municipal<br>*Commercial & Industrial<br>*Agricultural<br>*Mining | Act 64, 1979, Hazardous Waste Management Act<br><br>Act 245, 1929, Water Resources Commission Act<br><br>Act 98, 1913, Sewerage Systems Act                                                                                                                                                          | YES                        | The monetary penalty for violation of Act 98 is low |
| Irrigation<br>*Wastewater<br>*Agricultural                                                  | P.L. 93-523, Federal Safe Drinking Water Act, Section 1442 (b) (3) (c) (Surface Impoundment Assessment Program)<br><br>Act 98, 1913, Sewerage Systems Act<br><br>Act 245, 1929, Water Resources Commission Act<br><br>Act 346, 1972, Inland Lakes and Streams Act (intake structures for irrigation) | YES                        | The monetary penalty for violation of Act 98 is low |

| Pollutant Source                                                                                                                                | Legal Authority                                                                                                                                                                                                                                    | Is the authority adequate?          | Remarks                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------|
| Septic Tanks & Tile Fields<br>*Domestic                                                                                                         | County or district-wide sanitary codes (local health departments receive authorization from Act 368, 1978, the Public Health Code)                                                                                                                 |                                     | Not uniformly applied throughout the state |
| *Commercial and Industrial                                                                                                                      | Act 245, 1929, Water Resources Commission Act<br>Act 64, 1979, Hazardous Waste Management Act                                                                                                                                                      | YES                                 |                                            |
| *Municipal                                                                                                                                      | Act 98, 1913, Sewerage Systems Act                                                                                                                                                                                                                 |                                     |                                            |
| Sites Where Chemicals are Produced, stored, used or Handled<br>*Commercial & Manufacturing sites                                                | Act 207, 1941, Fire Prevention Code<br>Act 64, 1979, Hazardous Waste Management Act<br>Act 245, 1929, Water Resources Commission Act (storage permits)                                                                                             | NO                                  |                                            |
| *Pesticide, Herbicide or Fertilizer Formulators, Dealers or Applicators                                                                         | Act 245, 1929, Water Resources Commission Act, Part 5 (PIPP)<br>Act 171, 1976, Pesticide Control Act<br>P.L. 92-516, Federal Insecticide, Fungicide and Rodenticide Act                                                                            | YES                                 |                                            |
| Materials Storage<br>*Road Salt Storage Facilities<br>*Petroleum Bulk Storage Sites<br>*Underground storage of chemicals and petroleum products | Act 245, 1929, Water Resources Commission Act, Part 5 Rules<br>Michigan Flammable Liquid Regulations of 1973, under the Authority of Act 207, 1941, the Michigan Fire Prevention Code, as amended by Act 3, 1978, the Michigan Fire Protection Act | REMEDIAL - YES<br>PREVENTATIVE - NO |                                            |

| Pollutant Source                                                                                          | Legal Authority                                                                                                                                                                                                                                         | Is the authority adequate? | Remarks                                               |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------|
| Materials Storage<br>(CONTINUED)<br>*Storage of hazardous wastes                                          | Act 64, 1979, Hazardous Waste Management Act                                                                                                                                                                                                            |                            |                                                       |
| Deep Wells<br>*Waste Disposal<br>*Storage<br>*Natural Brine Production<br>*Solution Mining<br>*Test Wells | Act 64, 1979, Hazardous Waste Management Act<br><br>Act 245, 1929, Water Resources Commission Act<br><br>Act 315, 1969, Mineral Wells Act                                                                                                               | YES                        | Resources are inadequate                              |
| Oil & Gas Fields<br>*Exploring, Producing and abandoned wells<br>*Re-injection of brines                  | Act 207, 1941, Fire Prevention Code<br><br>Act 61, 1939, Oil and Gas Act<br><br>Act 197, 1954, Michigan Unitization Act                                                                                                                                 | YES                        |                                                       |
| Other Disposal Sites<br>*Septage Disposal Sites                                                           | Act 98, 1913, Sewerage Systems Act (municipal)<br><br>Act 245, 1929, Water Resources Commission Act, Part 22 Rules<br><br>Act 64, 1979, Hazardous Waste Management Act<br><br>Act 243, 1951, Servicing of Septic Tanks, Seepage Pits, and Cesspools Act | NO                         | Loading criterion is needed<br><br><br>Needs updating |
| *Liquid Industrial Waste Disposal Sites                                                                   | Act 136, 1969, Liquid Industrial Wastes<br><br>Act 207, 1941, Fire Prevention Code<br><br>Act 245, 1929, Water Resources Commission Act<br><br>Act 64, 1979, Hazardous Waste Management Act<br><br>Act 641, 1972, Solid Waste Management Act            | YES                        | Act 136 is duplicative of Act 64 in some respects     |

| Pollutant Source                                                       | Legal Authority                                                                                                                                                                                                                                | Is the authority adequate?          | Remarks |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------|
| Other Disposal Sites<br>(CONTINUED)<br>*Dry Wells                      | Act 245, 1929, Water Resources Commission Act<br>Act 64, 1979, Hazardous Waste Management Act<br>Act 368, 1978, Public Health Code (for overflow from septic tanks)<br>P.L. 93-523, Federal Safe Drinking Water Act (UIC program)              | YES                                 |         |
| *Brining & Oiling<br>of Roads                                          | Act 245, 1929, Water Resources Commission Act<br>Act 64, 1979, Hazardous Waste Management Act<br>Act 61, 1939, Oil and Gas Act<br>P.L. 94-469, 1976, Toxic Substances Control Act<br>P.L. 94-580, 1976, Resource Conservation and Recovery Act | YES                                 |         |
| Spills of Oil or Hazardous Materials<br>*Highways, Roads and Railroads | Act 245, 1929, Water Resources Commission Act, Part 5 Rules<br>Act 64, 1979, Hazardous Waste Management Act<br>P.L. 92-500, 1972, Federal Clean Water Act, <u>Section 311</u><br>Act 245, 1929, Water Resources Commission Act                 | REMEDIAL - YES<br>PREVENTATIVE - NO |         |
| *Pipelines                                                             |                                                                                                                                                                                                                                                |                                     |         |

| Pollutant Source                                                   | Legal Authority                                                                                                                              | Is the authority adequate? | Remarks |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------|
| Spills of Oil or Hazardous Materials<br>(CONTINUED)<br>*Any Source | Act 207, 1941, Fire Prevention Code<br><br>Act 64, 1979, Hazardous Waste Management Act<br><br>Act 245, 1929, Water Resources Commission Act |                            |         |